

ATTACHMENT 15

**CHAIN-OF-CUSTODY SHEETS, GAMMA SURVEY RECORDS, AND
ANCILLARY INFORMATION ASSOCIATED WITH SURVEY UNITS
CONTAINING ANOMALOUS SOIL SAMPLE RESULTS AS LISTED IN
TABLES 2 AND 3**

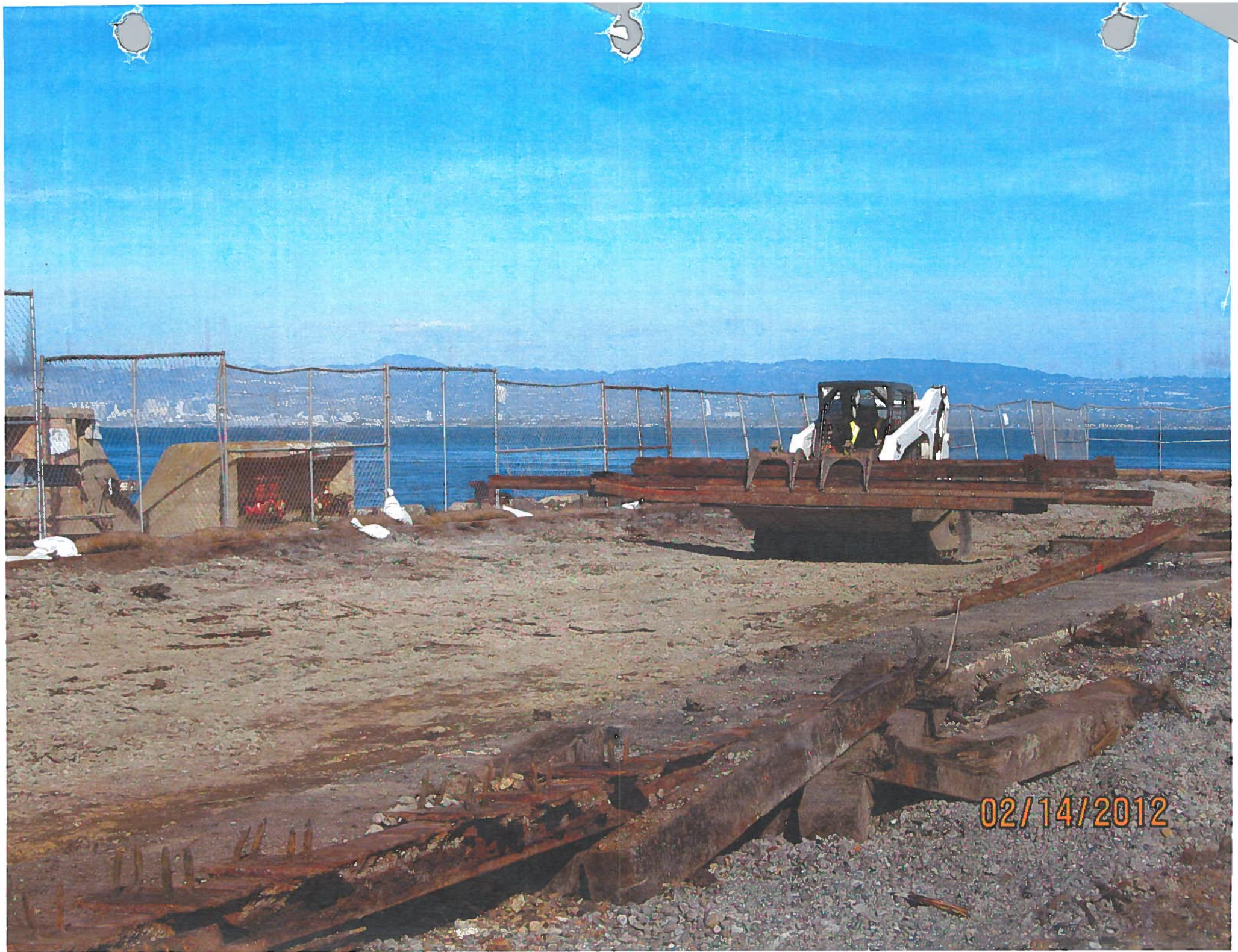
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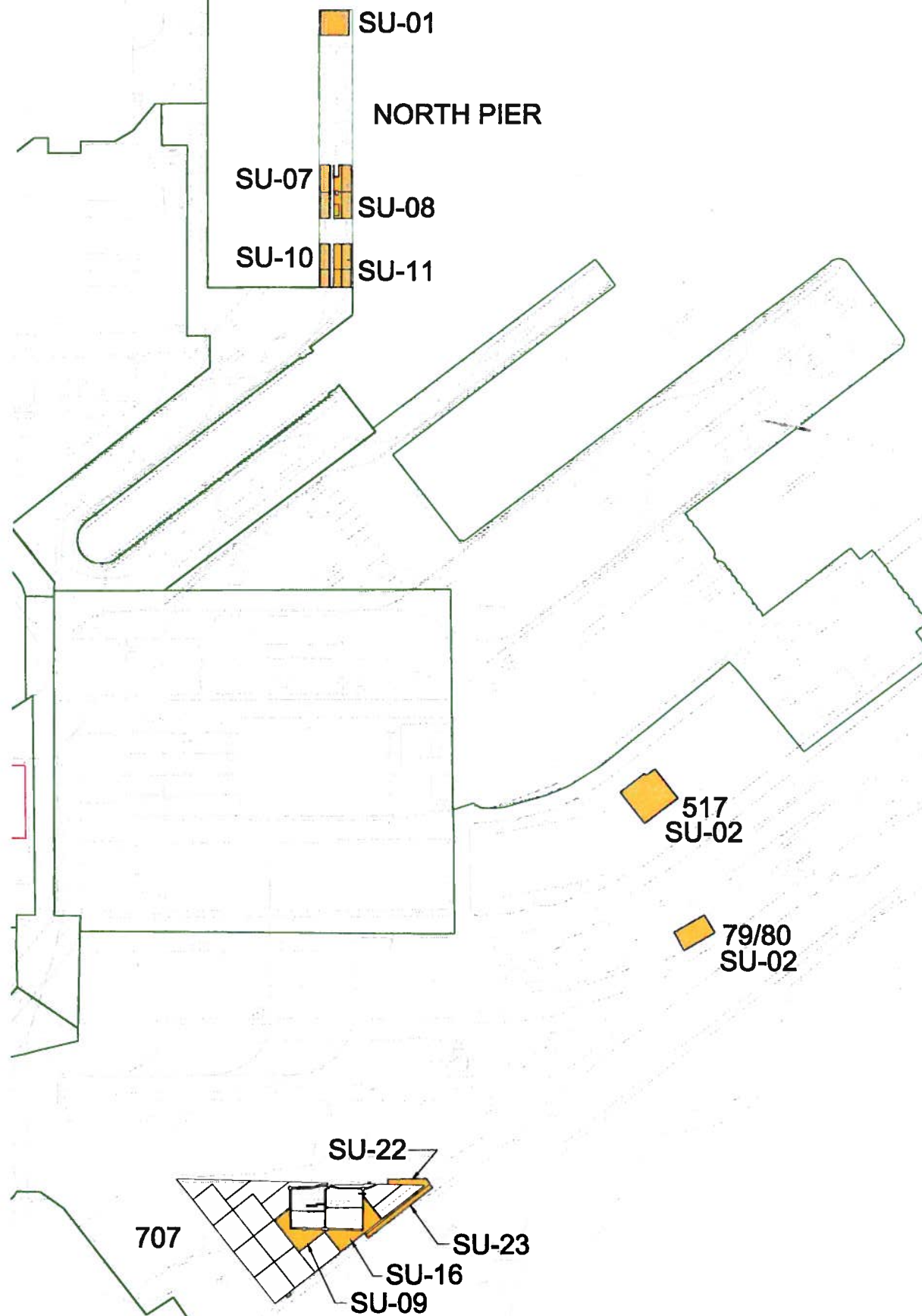
Survey Units with Final Systematic (K-40 < 3pCi/g) Grouped by Collection Date			Sample Sets Submitted to the On-Site Laboratory on the Same Collection Date				Average pCi/g for each Sample Set				
Area	Survey Unit	Date	Other Sets Collected	Other Sets' Work Area(s)	Sample Type	# of Samples	K-40	Ra-226	Cs-137	Bi-214	Pb-214
707	16	7-Jun-11	TU192	WA33	Post-Remediation	3	8.6816667	1.6016667	-0.002302	0.9235333	1.0553333
			TU194	WA33	Post-Remediation	15	8.9774	1.7384933	-0.0002165	1.1592533	1.2522
			503-1	WA36	Systematic	20	11.05	0.5903385	0.01651934	0.32879	0.39105
			503-12	WA36	Systematic	20	11.6591	0.7018	0.02464353	0.44671	0.49574
707	9	8-Jun-11	707-17	WA21	Systematic	20	5.4452	0.426523	-0.0022822	0.1902325	0.201465
			503-2	WA36	Systematic	20	11.0699	0.654845	0.01359965	0.283955	0.34918
			503-3	WA36	Systematic	20	11.46345	0.5296545	0.01241905	0.27648	0.33993
			503-4	WA36	Systematic	20	10.56035	0.49279	0.005210645	0.32902	0.3919
			503-5	WA36	Systematic	20	10.65195	0.58565	0.002949475	0.322905	0.35349
			503-6	WA36	Systematic	20	12.3204	0.68816485	0.012116105	0.351625	0.39877
7980	2	4-Apr-12	C0670	RSY2 Closeout	Closeout	3	11.749667	0.854	0.00201	0.5408667	0.5111667
			E0626	WA36	Characterization	2	9.0665	1.225	-0.0016095	1.059	1.187
			500SA-3	WA36	Post-Remediation	10	1.53473	0.146627	0.0014229	0.100825	0.144147
			500SA-18	WA36	Post-Remediation	3	10.530333	0.6224333	-0.0010542	0.3780667	0.4409667
			MH1275	WA36	Sediment	1	20.53	0.6118	0.2828	0.4252	0.446
			MH1276	WA36	Sediment	1	14.19	0.7705	0.09744	0.3214	0.4232
517	2	10-Apr-12	ES0659	WA33/36	Biased/Systematic	24	11.649292	0.7707633	0.0001171	0.5520667	0.5704
			MH1281	WA36	Sediment	1	21.61	0.8152	0.03745	0.5686	0.6727
NPR	1	31-May-12	TU304	WA32	Systematic	18	11.473944	0.5690478	-0.0004078	0.3517944	0.4014111
		8	500SA-17	WA36	Characterization	6	9.787	0.6317333	0.0024228	0.3844667	0.4284
		10	MH1257	WA36	Sediment	1	11.13	1.026	0.06539	0.3858	0.3451
		11	MH1261	WA36	Sediment	1	11.23	0.8495	0.0002898	0.2319	0.6089
			MH1266	WA36	Sediment	1	12.11	0.4134	0.08382	0.3947	0.4069
			MH1267	WA36	Sediment	1	12.66	-0.04509	0.04731	0.3573	0.4896
NPR	7	4-Jun-12	MH1255	WA36	Sediment	1	17.78	0.9314	1.374	0.335	0.5439
			MH1258	WA36	Sediment	1	10.63	0.2356	0.06291	0.3154	0.4803
			MH1259	WA36	Sediment	1	11.98	0.7576	0.2475	0.4214	0.4241
			MH1260	WA36	Sediment	1	12.79	0.7244	0.01177	0.3565	0.432
			MH1262	WA36	Sediment	1	13.02	0.7402	0	0.2318	0.2836

Survey Units with Final Systematic (K-40 < 3pCi/g) Grouped by Collection Date			Sample Sets Submitted to the On-Site Laboratory on the Same Collection Date				Average pCi/g for each Sample Set				
Area	Survey Unit	Date	Other Sets Collected	Other Sets' Work Area(s)	Sample Type	# of Samples	K-40	Ra-226	Cs-137	Bi-214	Pb-214
707	23	31-Jul-12	C0733	Shaw Ship Sheilding	Biased/Systematic	33	12.933273	0.881003	0.0131708	0.5715273	0.6571333
			C0739	Shaw Ship Sheilding	Biased/Systematic	36	12.667528	0.8115389	0.0097074	0.5586833	0.6640972
			D0743	Shaw Ship Sheilding	Biased/Systematic	36	9.4631111	0.9326028	-0.0006936	0.7903333	0.8757722
			ERRU000159	WA36	Waste Bin	1	18.82	0.5284	0.002127	0.408	0.378
			500SA-15	WA36	Post-Remediation	3	8.001666667	0.484166667	0.000109267	0.3973	0.351333333
			506-ANC247	WA36	Ancillary	1	18.76	0.4323	0.469	0.181	0.2582
			707-22	WA21	Systematic	20	13.58942	0.492767	0.0487368	0.28277	0.32243
707	22	23-Aug-12									





02/14/2012



	BASE REALIGNMENT AND CLOTURE PROGRAM MANAGEMENT OFFICE WEST SAN DIEGO, CALIFORNIA
<p align="center">FIGURE 1 LOW K-40 SURVEY UNITS HUNTERS POINT SHIPYARD, SAN FRANCISCO, CA</p>	
REVISION: AUTHOR: A. CRABTREE PROJECT NO: FILE: SEE BELOW	TETRA TECH EC, INC.

NPR	11	48	Systematic	02NPR-S0011-F048-01	30-Oct-12	J Taylor/M Winder
NPR	11	49	Systematic	02NPR-S0011-F049-01	30-Oct-12	J Taylor/M Winder
NPR	11	50	Systematic	02NPR-S0011-F050-01	30-Oct-12	J Taylor/M Winder
NPR	11	51	Systematic	02NPR-S0011-F051-01	30-Oct-12	J Taylor/M Winder
NPR	11	52	Systematic	02NPR-S0011-F052-01	30-Oct-12	J Taylor/M Winder
NPR	11	53	Systematic	02NPR-S0011-F053-01	30-Oct-12	J Taylor/M Winder
NPR	11	54	Systematic	02NPR-S0011-F054-01	30-Oct-12	J Taylor/M Winder
NPR	11	55	Systematic	02NPR-S0011-F055-01	30-Oct-12	J Taylor/M Winder
NPR	11	56	Systematic	02NPR-S0011-F056-01	30-Oct-12	J Taylor/M Winder
NPR	11	57	Systematic	02NPR-S0011-F057-01	30-Oct-12	J Taylor/M Winder
NPR	11	58	Systematic	02NPR-S0011-F058-01	30-Oct-12	J Taylor/M Winder
NPR	11	59	Systematic	02NPR-S0011-F059-01	30-Oct-12	J Taylor/M Winder
NPR	11	60	Systematic	02NPR-S0011-F060-01	30-Oct-12	J Taylor/M Winder
NPR	11	61	Systematic	02NPR-S0011-F061-01	30-Oct-12	J Taylor/M Winder
NPR	11	62	Systematic	02NPR-S0011-F062-01	30-Oct-12	J Taylor/M Winder
NPR	11	63	Systematic	02NPR-S0011-F063-01	30-Oct-12	J Taylor/M Winder
NPR	11	64	Systematic	02NPR-S0011-F064-01	30-Oct-12	J Taylor/M Winder
NPR	11	65	Systematic	02NPR-S0011-F065-01	30-Oct-12	J Taylor/M Winder
NPR	11	66	Systematic	02NPR-S0011-F066-01	30-Oct-12	J Taylor/M Winder

12.14	0.2555	0.005146	0.4333	0.409
9.099	0.25	-0.001031	0.1485	0.4051
16.97	0.6765	-0.004835	0.5016	0.5628
13.41	1.043	0.007397	0.4005	0.4926
8.479	-0.03818	0.008437	0.3315	0.2834
7.729	0.7058	-0.001774	0.2842	0.2897
7.245	0.3539	0.005391	0.1395	0.3227
8.09	0.7814	-0.00497	0.2325	0.4314
7.659	0.4121	-0.0006429	0.1912	0.2862
7.622	0.7293	-0.008737	0.297	0.1676
13.23	0.8045	0.009238	0.4011	0.3905
10.76	0.7667	0.01065	0.1496	0.3622
5.482	0.2624	0.01339	0.101	0.2512
9.871	0.731	0.002692	0.3444	0.3717
7.096	0.4656	0.004129	0.3798	0.356
7.92	0.8474	0	0.2265	0.1184
7.835	0.3401	-0.007842	0.1825	0.1433
10.78	0.8868	0	0.379	0.4846
4.761	0.2135	-0.001662	0.004619	0.04502

12.2	0.53
9.04	0.363
18.1	0.616
12.7	0.604
9.26	0.384
8.9	0.377
6.87	0.176
6.2	0.304
8.42	0.34
7.41	0.388
15.9	0.632
10.5	0.388
6.81	0.263
9.89	0.445
9.49	0.34
7.31	0.475
7.53	0.272
11.4	0.432
6	0.154

Highlighted Activities: $K-40 \leq 3$; $Ra-226 \geq 1.633$ (On-site) & 1.375 (Off-site) ; $Cs-137 \geq 0.113$; $Bi-214 \geq 1.375$; $Pb-214 \geq 1.375$ (pCi/g)

Area	Unit	Data Set	Sample Range	Statistic
500SA	3	Complete	All	Mean
				Median
				Std Dev
		Systematic 1	1 to 36	Mean
				Median
				Std Dev
		Post-Remediation	45 to 54	Mean
				Median
				Std Dev
		Final	55 to 90	Mean
				Median
				Std Dev

K-40	Ra-226	Cs-137	Bi-214	Pb-214
12.99621222	0.683494889	0.007534049	0.433250444	0.505590889
11.265	0.56505	0.0048795	0.37125	0.4509
8.661011939	0.587010798	0.010593207	0.316484894	0.315435349
18.34113333	1.058046944	0.007472389	0.623861667	0.695954722
17.215	0.89045	0.0048795	0.57345	0.61215
9.405391318	0.631667105	0.01119883	0.31345425	0.320588433
1.53473	0.146627	0.00142287	0.100825	0.144147
1.334	0.1534	0.00137105	0.081605	0.1736
0.894199973	0.180318641	0.004391025	0.073026849	0.077950462
10.68011111	0.493355556	0.010753289	0.330174167	0.416397222
11.125	0.5283	0.008198	0.3466	0.4111
2.773371798	0.287946637	0.010840423	0.143237119	0.106635045

K-40	Ra-226	Cs-137	Bi-214	Pb-214
9.444722222	0.441138889	0.013055806	0.441138889	0.480694444
9.77	0.429	0.01385	0.429	0.466
2.323737736	0.1417878	0.01510582	0.1417878	0.148926409
9.444722222	0.441138889	0.013055806	0.441138889	0.480694444
9.77	0.429	0.01385	0.429	0.466
2.323737736	0.1417878	0.01510582	0.1417878	0.148926409

517	2	Complete	All	Mean
				Median
				St Dev
		Systematic 1	8 to 43	Mean
				Median
				St Dev
		Systematic 2	72 to 107	Mean
				Median
				St Dev
		Final	123 to 158	Mean
				Median
				St Dev
		Re-Sample	159 to 194	Mean
				Median
				St Dev

13.17619124	0.795367711	0.00248355	0.528548928	0.589911753
12.86	0.71005	0	0.47265	0.5335
7.900874391	0.530329346	0.011383402	0.354917922	0.373026445
13.51088889	0.944655556	0.004310383	0.671380556	0.765191667
13.84	0.7566	0.0041285	0.5733	0.6431
2.551120838	0.668385796	0.010320138	0.434768916	0.432966776
16.92733333	0.899296833	-0.000484341	0.603491667	0.675962222
15.825	0.9365	0	0.6573	0.7456
7.614985924	0.4771655	0.007251223	0.295380036	0.296029064
1.722169444	0.269878889	0.000792768	0.123669222	0.155880833
1.65	0.24775	0	0.10835	0.175
0.535136812	0.179550587	0.005301076	0.064529456	0.059808911
15.16527778	0.899355556	0.004106869	0.573577778	0.622864722
14.775	0.9075	0.0029095	0.54765	0.61495
5.131540852	0.33000226	0.009821969	0.182264282	0.220439492

1.778222222	0.174277778	-0.000627175	0.174277778	0.217305556
1.755	0.1835	-0.00002415	0.1835	0.2165
0.599023401	0.086877668	0.010680146	0.086877668	0.055414196
1.778222222	0.174277778	-0.000627175	0.174277778	0.217305556
1.755	0.1835	-0.00002415	0.1835	0.2165
0.599023401	0.086877668	0.010680146	0.086877668	0.055414196

707	3, 9, 16, 17, 22 & 23	Complete	All	Mean
				Median
				St Dev
	3	Systematic 1	1 to 20	Mean
				Median
				St Dev
	3	Final	37 to 56	Mean
				Median
				St Dev
	9	Systematic 1	1 to 20	Mean

9.917060235	0.420103201	0.071225819	0.326519576	0.340693748
10.28	0.3903	0.001496	0.2936	0.3209
7.0392389	0.343818321	0.706283537	0.259790831	0.242107678
14.40704	0.568364	0.069449945	0.519629	0.4737175
14.1315	0.5538	0.0669285	0.536935	0.486285
2.805919125	0.276582125	0.049181746	0.095507452	0.0887167
3.557435	0.14545	-0.000482466	0.1162504	0.162627
3.0195	0.14165	0	0.09564	0.15725
2.175527811	0.235232117	0.004671429	0.06602057	0.098493481
15.01239	0.4954676	0.047459605	0.5980035	0.5560145

4.95204	0.25607735	-0.002100692	0.25607735	0.2986835
4.115	0.2305	0	0.2305	0.2845
4.073409389	0.200109168	0.015150163	0.200109168	0.201847031
3.101	0.18709	-0.005641005	0.18709	0.26892
2.605	0.1535	-0.0026325	0.1535	0.26
1.735614255	0.170000941	0.012743543	0.170000941	0.166640131

Area	Unit	Data Set	Sample Range	Statistic	K-40	Ra-226	Cs-137	Bi-214	Pb-214	K-40	Ra-226	Cs-137	Bi-214	Pb-214
				Median	15	0.53643	0.02443	0.63671	0.516465					
				St Dev	4.511639684	0.397558208	0.059939792	0.179112329	0.183841768					
9	Systematic 2	35 to 54	Mean	10.4735	0.55018	0.004387815	0.357355	0.399475		9.41	0.4935	-0.0015218	0.4935	0.55315
			Median	10.525	0.59675	0.0007595	0.3603	0.3979		9.42	0.499	-0.000253	0.499	0.5495
			St Dev	0.842408358	0.243276184	0.007372801	0.068699318	0.061780817		1.076514845	0.082457325	0.016073802	0.082457325	0.093446452
9	Final	59 to 78	Mean	0.80598	0.0821818	0.002953173	0.0103724	0.01332565		0.8422	0.0312185	0.004558085	0.0312185	0.07594
			Median	0.7873	0.07004	0.00031775	0.000159	0.0095755		0.8195	0.0284	0.0005998	0.0284	0.0601
			St Dev	0.370837433	0.12690064	0.005311997	0.025365832	0.024290664		0.381097667	0.04244255	0.008670193	0.04244255	0.070134483
16	Systematic 1	1 to 20	Mean	16.53146	0.4312124	0.11944257	0.5599355	0.5771585						
			Median	17.7565	0.407135	0.0561225	0.585795	0.6163						
			St Dev	4.937521896	0.348833698	0.125423115	0.15631116	0.172124674						
16	Systematic 2	45 to 64	Mean	6.1335	0.29803085	-0.001129609	0.199165	0.241125		5.445	0.30034	-0.00908415	0.30034	0.33565
			Median	6.224	0.2762	-0.0001685	0.18325	0.23555		5.32	0.332	-0.004775	0.332	0.34
			St Dev	0.822958559	0.199463576	0.004818448	0.094391911	0.067840679		1.439672843	0.127956836	0.018025837	0.127956836	0.054134603
16	Final	67 to 86	Mean	2.67289	0.239761	-0.001695986	0.0709005	0.10363939		2.5165	0.186695	-0.000203	0.186695	0.227785
			Median	2.312	0.2077	-0.00015125	0.059805	0.085545		2.325	0.175	0.0000835	0.175	0.214
			St Dev	1.845684479	0.199687099	0.003635007	0.077647226	0.086212283		1.207501052	0.125009484	0.014080454	0.125009484	0.162522178
17	Systematic 1	1 to 20	Mean	17.577175	0.6082214	0.04481731	0.678111	0.633214						
			Median	16.6795	0.66646	0.0228405	0.694535	0.63188						
			St Dev	3.991650744	0.383009878	0.092839642	0.140039871	0.151929846						
17	Systematic 2	42 to 61	Mean	10.8236	0.5840755	0.001566781	0.4116445	0.40788		10.158	0.5246	-0.0036223	0.5246	0.5607
			Median	11.555	0.5763	-0.000035095	0.44895	0.4183		10.35	0.5185	-0.000123	0.5185	0.5675
			St Dev	1.837615486	0.249125984	0.010096762	0.102429562	0.084663182		1.591227927	0.106308588	0.016346124	0.106308588	0.102179975
17	Final	64 to 83	Mean	5.4452	0.426523	-0.002282165	0.1902325	0.201465		5.0495	0.33565	-0.0026422	0.33565	0.32665
			Median	5.662	0.4495	0	0.18225	0.1895		5.135	0.328	0	0.328	0.363
			St Dev	0.681996188	0.199430312	0.003943233	0.067966393	0.052572139		1.055992798	0.05715839	0.01242772	0.05715839	0.087722214
22	Systematic 1	12 to 31	Mean	11.32665	0.3207665	0.002395868	0.22566	0.2696915		11.109	0.359075	0.005568	0.359075	0.428135
			Median	12.145	0.3039	0.0013769	0.20705	0.26675		11.6	0.3525	0.00549	0.3525	0.3805
			St Dev	3.81930118	0.337238273	0.005674834	0.118721525	0.128643382		3.275831594	0.18548828	0.010877014	0.18548828	0.178968613
22	Systematic 2	44 to 63	Mean	13.58942	0.492767	0.048736795	0.28277	0.32243						
			Median	13.8	0.52605	0.0076575	0.3155	0.3408						
			St Dev	4.512351224	0.325582053	0.08533449	0.123132753	0.144389405						
22	Final	81 to 100	Mean	0.72487	0.1317289	-0.000109735	0.03271915	0.06452715		0.6553	0.062253	-0.0026707	0.062253	0.07712
			Median	0.6407	0.1092	0	0.03361	0.0547		0.6695	0.0525	-0.000555	0.0525	0.0708
			St Dev	0.277554964	0.156532532	0.00411817	0.027989508	0.047841254		0.4363766	0.07258278	0.012910224	0.07258278	0.038658105
23	Final	5 to 24	Mean	1.198355	0.11314844	0.000850075	0.05109795	0.08229095		1.2339	0.080352	-0.00574785	0.080352	0.132785
			Median	1.1985	0.14105	0	0.05451	0.061315		1.15	0.0836	-0.00195	0.0836	0.1455
			St Dev	0.429891765	0.119948732	0.004007958	0.03319066	0.062561069		0.370434581	0.071982784	0.021997823	0.071982784	0.069812895

Area	Unit	Data Set	Sample Range	Statistic	K-40	Ra-226	Cs-137	Bi-214	Pb-214	K-40	Ra-226	Cs-137	Bi-214	Pb-214	
7980	2	Complete	All	Mean	4.832349375	0.284894188	0.036972417	0.15204949	0.191149063	1.99791	0.164315	0.009205	0.164315	0.177375	
				Median	1.759	0.1518	0.014825	0.06285	0.092485	0.5455	0.1155	0.006995	0.1155	0.1545	
				St Dev	6.470395115	0.354335897	0.058046458	0.178157354	0.220255234	4.511833978	0.153500222	0.019313455	0.153500222	0.153698923	
		Final	3 to 6, 8 to 22, 28	Mean	2.2353375	0.14748225	0.006272035	0.085874275	0.0871569	1.99791	0.164315	0.009205	0.164315	0.177375	
				Median	0.6083	0.08749	0.00155675	0.044975	0.046845	0.5455	0.1155	0.006995	0.1155	0.1545	
				St Dev	5.170182115	0.270457092	0.01218073	0.143044955	0.146200278	4.511833978	0.153500222	0.019313455	0.153500222	0.153698923	
		Re-Sample	29 to 48	Mean	8.3348	0.491335	0.073295	0.24809745	0.346294						
				Median	6.6205	0.3887	0.047095	0.2131	0.3778						
				St Dev	5.95749911	0.346753637	0.066398078	0.178480113	0.196450403						
	NPR	1,7,8,10, 11	Complete	All	Mean	8.893148387	0.47411751	0.009063723	0.277411966	0.333935663	3.190442623	0.22128041	0.006707113	0.22128041	0.262368852
					Median	8.129	0.4327	0.0008782	0.2328	0.2898	1.265	0.174	0.0007595	0.174	0.223
					St Dev	7.287537043	0.354480482	0.026223499	0.215415134	0.233266162	5.088031729	0.192796459	0.024562022	0.192796459	0.180645603
i		Systematic 1	3 to 22	Mean	17.0906	0.85831	0.00756183	0.641415	0.70298						
				Median	16.57	0.90495	0.0063085	0.6356	0.65775						
				St Dev	4.369138039	0.354320258	0.009852577	0.17340317	0.187682068						
1		Final	28 to 47	Mean	0.85799	0.12554275	-0.001074045	0.04713675	0.0780465	0.80125	0.19355	-0.001177295	0.19355	0.224975	
				Median	0.83125	0.1296	0	0.053185	0.07633	0.6945	0.186	0	0.186	0.225	
				St Dev	0.313446045	0.162197413	0.004430395	0.038646799	0.036326346	0.413031651	0.12775026	0.009401146	0.12775026	0.104094218	
7		Systematic 1	3 to 22	Mean	13.3008	0.59536	0.017158965	0.36853	0.40228						
				Median	12.53	0.61885	0.0033885	0.3574	0.37925						
				St Dev	5.429274595	0.253239869	0.055899494	0.142301363	0.134485071						
7	Final	30 to 49	Mean	1.55229	0.2316825	-0.000954859	0.08981005	0.1449855	1.3079	0.1428375	0.0025354	0.1428375	0.18336		
			Median	1.594	0.22905	0	0.095455	0.15245	1.29	0.1425	0	0.1425	0.1905		
			St Dev	0.396872439	0.117115601	0.00519961	0.05286266	0.054596236	0.654080705	0.074360107	0.012927058	0.074360107	0.077879478		
8	Systematic 1	3 to 22	Mean	12.4212	0.690445	0.01473632	0.35388	0.423435							
			Median	10.255	0.6288	0.004496	0.3518	0.3931							
			St Dev	5.562581553	0.30770083	0.024439136	0.166494013	0.155004143							
8	Final	32 to 51	Mean	1.256515	0.181917	0.000195555	0.094562275	0.1363755	1.28345	0.185493	-0.00046025	0.185493	0.22657		
			Median	1.2105	0.2159	0	0.08632	0.1266	1.315	0.1945	0.0003315	0.1945	0.24		
			St Dev	0.35970205	0.180818237	0.005601427	0.053432509	0.061597534	0.341740972	0.099646868	0.009738174	0.099646868	0.059652795		
10	Systematic 1	3 to 22	Mean	13.19005	0.5334918	0.012328835	0.343065	0.3960175							
			Median	11.005	0.6374	0.004808	0.3225	0.4038							
			St Dev	6.549418909	0.322351298	0.030365556	0.147309368	0.180605378							
10	Final	27 to 46	Mean	0.89772	0.17755712	-0.001345335	0.0756	0.099193	0.69825	0.11966	0.006579	0.11966	0.165935		
			Median	0.8814	0.1572	0	0.076115	0.08133	0.639	0.09635	0.00578	0.09635	0.179		
			St Dev	0.268089835	0.146443925	0.004198854	0.035706923	0.052523436	0.472509746	0.113456513	0.012045636	0.113456513	0.065036389		
10	Re-Sample	47 to 66	Mean	9.49525	0.552443	0.004254845	0.248538	0.296093							

Area	Unit	Data Set	Sample Range	Statistic	K-40	Ra-226	Cs-137	Bi-214	Pb-214	K-40	Ra-226	Cs-137	Bi-214	Pb-214
				Median	7.935	0.56805	0.0001571	0.20295	0.26675					
				St Dev	3.848433624	0.269549217	0.007289299	0.180587115	0.164539314					
	11	Systematic 1	3 to 22	Mean	14.8632	0.714425	0.00863232	0.443785	0.536735					
				Median	13.805	0.7658	0.006891	0.4393	0.54035					
				St Dev	6.156507525	0.405537893	0.014944824	0.183401576	0.199241124					
	11	Final	27 to 46	Mean	1.270505	0.1801841	0.003229867	0.0763634	0.1118205	1.27285	0.13367	-7.8965E-05	0.13367	0.18146
				Median	1.171	0.16805	0.0022585	0.07029	0.094115	1.275	0.1065	-0.00018	0.1065	0.186
				St Dev	0.432154281	0.164396121	0.004786649	0.051002067	0.063558188	0.226200022	0.08604735	0.008966016	0.08604735	0.062496386
	11	Re-Sample	47 to 66	Mean	9.5119	0.556221	0.002026605	0.27739595	0.331596					
				Median	8.2845	0.6568	0.001346	0.2906	0.3591					
				St Dev	3.112835632	0.285573093	0.006180683	0.132274691	0.13562092					
PCT	238, 242, 302	Complete	All	Mean	3.459828283	0.366421687	0.001730108	0.222309455	0.263823141	1.590833333	0.133612778	0.001480389	0.133612778	0.166498148
				Median	1.938	0.2186	0.00006497	0.08348	0.1399	1.31	0.117	0	0.117	0.1605
				Std Dev	3.881205814	0.442967201	0.006487747	0.298279301	0.329325746	2.307362259	0.104705267	0.012691031	0.104705267	0.093391288
	238	Final	18 to 35	Mean	1.656866667	0.124800389	0.000601176	0.087622778	0.091095111	1.398333333	0.095282778	9.74444E-05	0.095282778	0.169894444
				Median	1.0895	0.07737	0	0.062975	0.07641	1.265	0.06205	0	0.06205	0.173
				Std Dev	1.267960694	0.175890168	0.004857032	0.084866456	0.072426088	0.872057203	0.078996017	0.012881196	0.078996017	0.099076681
	242	Systematic 1	1 to 18	Mean	4.607388889	0.584277778	9.89722E-05	0.345758333	0.43609					
				Median	4.059	0.4747	0	0.23895	0.2699					
				Std Dev	3.033270112	0.515503994	0.00765547	0.353343342	0.393992175					
	242	Final	25 to 42	Mean	2.947811111	0.279011111	0.001770693	0.10079	0.137298611	2.394722222	0.183822222	0.000225	0.183822222	0.178655556
				Median	2.054	0.2103	0.000107735	0.080685	0.11086	1.445	0.186	-0.000905	0.186	0.163
				Std Dev	4.518513828	0.236820781	0.004293728	0.109627057	0.124389674	3.75491986	0.125274032	0.013894564	0.125274032	0.107817341
	302	Final	5 to 22	Mean	1.303322222	0.091635	0.002380146	0.038648667	0.079100611	0.979444444	0.121733333	0.004118722	0.121733333	0.150944444
				Median	1.093	0.03334	0	0.044285	0.067425	0.93	0.0991	0	0.0991	0.147
				Std Dev	0.6547399	0.192329797	0.007056113	0.039964363	0.051338048	0.786718966	0.0887192	0.011492919	0.0887192	0.072981377

Area	Unit	Data Set	Sample Range	Statistic
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517	2	Complete	All	Mean	
				Median	
				St Dev	
		Systematic 1	8 to 43	Mean	
				Median	
				St Dev	
		Systematic 2	72 to 107	Mean	
				Median	
				St Dev	
		Final	123 to 158	Mean	
				Median	
				St Dev	

K-40	Ra-226	Cs-137	Bi-214	Pb-214
12.72298165	0.771674278	0.002113679	0.51828919	0.582403481
12.73	0.6547	0	0.44545	0.49415
8.351843243	0.564285036	0.011706693	0.383241661	0.399895927
13.51088889	0.944655556	0.004310383	0.671380556	0.765191667
13.84	0.7566	0.0041285	0.5733	0.6431
2.551120838	0.668385796	0.010320138	0.434768916	0.432966776
16.92733333	0.899296833	-0.000484341	0.603491667	0.675962222
15.825	0.9365	0	0.6573	0.7456
7.614985924	0.4771655	0.007251223	0.295380036	0.296029064
1.722169444	0.269878889	0.000792768	0.123669222	0.155880833
1.65	0.24775	0	0.10835	0.175
0.535136812	0.179550587	0.005301076	0.064529456	0.059808911

K-40	Ra-226	Cs-137	Bi-214	Pb-214
1.778222222	0.174277778	-0.000627175	0.174277778	0.217305556
1.755	0.1835	-0.00002415	0.1835	0.2165
0.599023401	0.086877668	0.010680146	0.086877668	0.055414196

1.778222222	0.174277778	-0.000627175	0.174277778	0.217305556
1.755	0.1835	-0.00002415	0.1835	0.2165
0.599023401	0.086877668	0.010680146	0.086877668	0.055414196

707	3, 9, 16, 17, 22 & 23	Complete	All	Mean	
				Median	
				St Dev	
	3	Systematic 1	1 to 20	Mean	
				Median	
				St Dev	
	3	Final	37 to 56	Mean	
				Median	
				St Dev	
	9	Systematic 1	1 to 20	Mean	
				Median	
				St Dev	
		Systematic 2	35 to 54	Mean	
				Median	
				St Dev	
	9	Final	59 to 78	Mean	
				Median	
				St Dev	
	16	Systematic 1	1 to 20	Mean	
				Median	
				St Dev	
	16	Systematic 2	45 to 64	Mean	
				Median	
				St Dev	
	16	Final	67 to 86	Mean	
				Median	

9.917060235	0.420103201	0.071225819	0.326519576	0.340693748
10.28	0.3903	0.001496	0.2936	0.3209
7.0392389	0.343818321	0.706283537	0.259790831	0.242107678
14.40704	0.568364	0.069449945	0.519629	0.4737175
14.1315	0.5538	0.0669285	0.536935	0.486285
2.805919125	0.276582125	0.049181746	0.095507452	0.0887167
3.557435	0.14545	-0.000482466	0.1162504	0.162627
3.0195	0.14165	0	0.09564	0.15725
2.175527811	0.235232117	0.004671429	0.06602057	0.098493481
15.01239	0.4954676	0.047459605	0.5980035	0.5560145
15	0.53643	0.02443	0.63671	0.516465
4.511639684	0.397558208	0.059939792	0.179112329	0.183841768
10.4735	0.55018	0.004387815	0.357355	0.399475
10.525	0.59675	0.0007595	0.3603	0.3979
0.842408358	0.243276184	0.007372801	0.068699318	0.061780817
0.80598	0.0821818	0.002953173	0.0103724	0.01332565
0.7873	0.07004	0.00031775	0.000159	0.0095755
0.370837433	0.12690064	0.005311997	0.025365832	0.024290664
16.53146	0.4312124	0.11944257	0.5599355	0.5771585
17.7565	0.407135	0.0561225	0.585795	0.6163
4.937521896	0.348833698	0.125423115	0.15631116	0.172124674
6.1335	0.29803085	-0.001129609	0.199165	0.241125
6.224	0.2762	-0.0001685	0.18325	0.23555
0.822958559	0.199463576	0.004818448	0.094391911	0.067840679
2.67289	0.239761	-0.001695986	0.0709005	0.10363939
2.312	0.2077	-0.00015125	0.059805	0.085545

4.95204	0.25607735	-0.002100692	0.25607735	0.2986835
4.115	0.2305	0	0.2305	0.2845
4.073409389	0.200109168	0.015150163	0.200109168	0.201847031

3.101	0.18709	-0.005641005	0.18709	0.26892
2.605	0.1535	-0.0026325	0.1535	0.26
1.735614255	0.170000941	0.012743543	0.170000941	0.166640131

9.41	0.4935	-0.0015218	0.4935	0.55315
9.42	0.499	-0.000253	0.499	0.5495
1.076514845	0.082457325	0.016073802	0.082457325	0.093446452

0.8422	0.0312185	0.004558085	0.0312185	0.07594
0.8195	0.0284	0.0005998	0.0284	0.0601
0.381097667	0.04244255	0.008670193	0.04244255	0.070134483

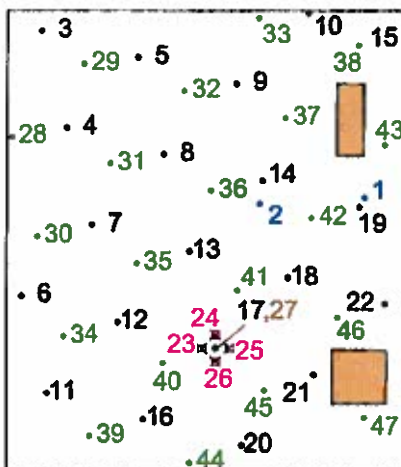
5.445	0.30034	-0.00908415	0.30034	0.33565
5.32	0.332	-0.004775	0.332	0.34
1.439672843	0.127956836	0.018025837	0.127956836	0.054134603

2.5165	0.186695	-0.000203	0.186695	0.227785
2.325	0.175	0.0000835	0.175	0.214

Area	Unit	Data Set	Sample Range	Statistic	K-40	Ra-226	Cs-137	Bi-214	Pb-214	K-40	Ra-226	Cs-137	Bi-214	Pb-214
				St Dev	1.845684479	0.199687099	0.003635007	0.077647226	0.086212283	1.207501052	0.125009484	0.014080454	0.125009484	0.162522178
	17	Systematic 1	1 to 20	Mean	17.577175	0.6082214	0.04481731	0.678111	0.633214					
				Median	16.6795	0.66646	0.0228405	0.694535	0.63188					
				St Dev	3.991650744	0.383009878	0.092839642	0.140039871	0.151929846					
	17	Systematic 2	42 to 61	Mean	10.8236	0.5840755	0.001566781	0.4116445	0.40788	10.158	0.5246	-0.0036223	0.5246	0.5607
				Median	11.555	0.5763	-0.000035095	0.44895	0.4183	10.35	0.5185	-0.000123	0.5185	0.5675
				St Dev	1.837615486	0.249125984	0.010096762	0.102429562	0.084663182	1.591227927	0.106308588	0.016346124	0.106308588	0.102179975
	17	Final	64 to 83	Mean	5.4452	0.426523	-0.002282165	0.1902325	0.201465	5.0495	0.33565	-0.0026422	0.33565	0.32665
				Median	5.662	0.4495	0	0.18225	0.1895	5.135	0.328	0	0.328	0.363
				St Dev	0.681996188	0.199430312	0.003943233	0.067966393	0.052572139	1.055992798	0.05715839	0.01242772	0.05715839	0.087722214
	22	Systematic 1	12 to 31	Mean	11.32665	0.3207665	0.002395868	0.22566	0.2696915	11.109	0.359075	0.005568	0.359075	0.428135
				Median	12.145	0.3039	0.0013769	0.20705	0.26675	11.6	0.3525	0.00549	0.3525	0.3805
				St Dev	3.81930118	0.337238273	0.005674834	0.118721525	0.128643382	3.275831594	0.18548828	0.010877014	0.18548828	0.178968613
	22	Systematic 2	44 to 63	Mean	13.58942	0.492767	0.048736795	0.28277	0.32243					
				Median	13.8	0.52605	0.0076575	0.3155	0.3408					
				St Dev	4.512351224	0.325582053	0.08533449	0.123132753	0.144389405					
	22	Final	81 to 100	Mean	0.72487	0.1317289	-0.000109735	0.03271915	0.06452715	0.6553	0.062253	-0.0026707	0.062253	0.07712
				Median	0.6407	0.1092	0	0.03361	0.0547	0.6695	0.0525	-0.000555	0.0525	0.0708
				St Dev	0.277554964	0.156532532	0.00411817	0.027989508	0.047841254	0.4363766	0.07258278	0.012910224	0.07258278	0.038658105
	23	Final	5 to 24	Mean	1.198355	0.11314844	0.000850075	0.05109795	0.08229095	1.2339	0.080352	-0.00574785	0.080352	0.132785
				Median	1.1985	0.14105	0	0.05451	0.061315	1.15	0.0836	-0.00195	0.0836	0.1455
				St Dev	0.429891765	0.119948732	0.004007958	0.03319066	0.062561069	0.370434581	0.071982784	0.021997823	0.071982784	0.069812895
7980	2	Complete	All	Mean	2.330598929	0.137436464	0.011027714	0.083443804	0.08033125	1.99791	0.164315	0.009205	0.164315	0.177375
				Median	0.3767	0.046955	0.00084835	0.03339	0.028625	0.5455	0.1155	0.006995	0.1155	0.1545
				St Dev	5.685492048	0.282536723	0.032976886	0.145327371	0.163476508	4.511833978	0.153500222	0.019313455	0.153500222	0.153698923
		Final	3 to 6, 8 to 22, 28	Mean	2.2353375	0.14748225	0.006272035	0.085874275	0.0871569	1.99791	0.164315	0.009205	0.164315	0.177375
				Median	0.6083	0.08749	0.00155675	0.044975	0.046845	0.5455	0.1155	0.006995	0.1155	0.1545
				St Dev	5.170182115	0.270457092	0.01218073	0.143044955	0.146200278	4.511833978	0.153500222	0.019313455	0.153500222	0.153698923
NPR	1,7,8,10, 11	Complete	All	Mean	8.790984937	0.460692491	0.01005502	0.279829538	0.337298201	3.190442623	0.22128041	0.006707113	0.22128041	0.262368852
				Median	8.211	0.4059	0.0008793	0.2472	0.2896	1.265	0.174	0.0007595	0.174	0.223
				St Dev	7.746284782	0.364967613	0.028086724	0.223889363	0.244532921	5.088031729	0.192796459	0.024562022	0.192796459	0.180645603
	1	Systematic 1	3 to 22	Mean	17.0906	0.85831	0.00756183	0.641415	0.70298					
				Median	16.57	0.90495	0.0063085	0.6356	0.65775					
				St Dev	4.369138039	0.354320258	0.009852577	0.17340317	0.187682068					
	1	Final	28 to 47	Mean	0.85799	0.12554275	-0.001074045	0.04713675	0.0780465	0.80125	0.19355	-0.001177295	0.19355	0.224975
				Median	0.83125	0.1296	0	0.053185	0.07633	0.6945	0.186	0	0.186	0.225
				St Dev	0.313446045	0.162197413	0.004430395	0.038646799	0.036326346	0.413031651	0.12775026	0.009401146	0.12775026	0.104094218

Area	Unit	Data Set	Sample Range	Statistic	K-40	Ra-226	Cs-137	Bi-214	Pb-214	K-40	Ra-226	Cs-137	Bi-214	Pb-214
	7	Systematic 1	3 to 22	Mean	13.3008	0.59536	0.017158965	0.36853	0.40228					
				Median	12.53	0.61885	0.0033885	0.3574	0.37925					
				St Dev	5.429274595	0.253239869	0.055899494	0.142301363	0.134485071					
	7	Final	30 to 49	Mean	1.55229	0.2316825	-0.000954859	0.08981005	0.1449855	1.3079	0.1428375	0.0025354	0.1428375	0.18336
				Median	1.594	0.22905	0	0.095455	0.15245	1.29	0.1425	0	0.1425	0.1905
				St Dev	0.396872439	0.117115601	0.00519961	0.05286266	0.054596236	0.654080705	0.074360107	0.012927058	0.074360107	0.077879478
	8	Systematic 1	3 to 22	Mean	12.4212	0.690445	0.01473632	0.35388	0.423435					
				Median	10.255	0.6288	0.004496	0.3518	0.3931					
				St Dev	5.562581553	0.30770083	0.024439136	0.166494013	0.155004143					
	8	Final	32 to 51	Mean	1.256515	0.181917	0.000195555	0.094562275	0.1363755	1.28345	0.185493	-0.00046025	0.185493	0.22657
				Median	1.2105	0.2159	0	0.08632	0.1266	1.315	0.1945	0.0003315	0.1945	0.24
				St Dev	0.35970205	0.180818237	0.005601427	0.053432509	0.061597534	0.341740972	0.099646868	0.009738174	0.099646868	0.059652795
	10	Systematic 1	3 to 22	Mean	13.19005	0.5334918	0.012328835	0.343065	0.3960175					
				Median	11.005	0.6374	0.004808	0.3225	0.4038					
				St Dev	6.549418909	0.322351298	0.030365556	0.147309368	0.180605378					
	10	Final	27 to 46	Mean	0.89772	0.17755712	-0.001345335	0.0756	0.099193	0.69825	0.11966	0.006579	0.11966	0.165935
				Median	0.8814	0.1572	0	0.076115	0.08133	0.639	0.09635	0.00578	0.09635	0.179
				St Dev	0.268089835	0.146443925	0.004198854	0.035706923	0.052523436	0.472509746	0.113456513	0.012045636	0.113456513	0.065036389
	11	Systematic 1	3 to 22	Mean	14.8632	0.714425	0.00863232	0.443785	0.536735					
				Median	13.805	0.7658	0.006891	0.4393	0.54035					
				St Dev	6.156507525	0.405537893	0.014944824	0.183401576	0.199241124					
	11	Final	27 to 46	Mean	1.270505	0.1801841	0.003229867	0.0763634	0.1118205	1.27285	0.13367	-7.8965E-05	0.13367	0.18146
				Median	1.171	0.16805	0.0022585	0.07029	0.094115	1.275	0.1065	-0.00018	0.1065	0.186
				St Dev	0.432154281	0.164396121	0.004786649	0.051002067	0.063558188	0.226200022	0.08604735	0.008966016	0.08604735	0.062496386

P:\CTO-02 CAD FILES (RAD EMAC)\DWG FILES\B_WORK AREA 32 TSP\CT02_WA-32_SURVEY UNITS.DWG
 PLOT/UPDATE: MAY 30 2012 14:55:17



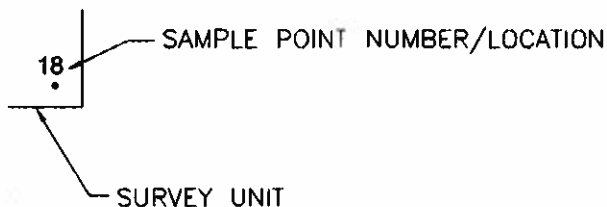
LEGEND:

- 1 BIASED 1-2
- 3 SYSTEMATIC 1 3-22
- 23 CHARACTERIZATION 23-26
- 27 POST-REMEDIATION 27
- 28 SYSTEMATIC 2 28-47
- CONCRETE
- △ AREAS PREVIOUSLY REMEDIATED

SU-01

CLASS 1

803.22 m² (8645.87 ft²)



RECORD COPY

SCALE 1:40

HUNTERS POINT SHIPYARD
SAN FRANCISCO, CA
 P.O. BOX 884836
 SAN FRANCISCO, CA 94188

NORTH PIER WA-32
SURVEY UNIT 01



TETRA TECH EC, INC
 1230 COLUMBIA STREET, SUITE 750
 SAN DIEGO, CA 92101
 TEL: (619) 234-8690 FAX: (619) 234-8591



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: NPR Survey Unit: 1 Class: 1 Area: 803.22 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1	3/12/2012 9:48	7456	6386	1070	600-BKGDS1B	6765	
2	3/12/2012 9:50	7272	6386	886	600-BKGDS1B	6765	
3	3/12/2012 9:51	5200	6386	-1186	600-BKGDS1B	6765	
4	3/12/2012 9:53	5643	6386	-743	600-BKGDS1B	6765	
5	3/12/2012 9:54	5791	6386	-595	600-BKGDS1B	6765	
6	3/12/2012 9:56	6150	6386	-236	600-BKGDS1B	6765	
7	3/12/2012 9:57	6468	6386	82	600-BKGDS1B	6765	
8	3/12/2012 9:58	6168	6386	-218	600-BKGDS1B	6765	
9	3/12/2012 10:00	6440	6386	54	600-BKGDS1B	6765	
10	3/12/2012 10:01	5154	6386	-1232	600-BKGDS1B	6765	
11	3/12/2012 10:02	6487	6386	101	600-BKGDS1B	6765	
12	3/12/2012 10:04	6224	6386	-162	600-BKGDS1B	6765	
13	3/12/2012 10:05	5744	6386	-642	600-BKGDS1B	6765	
14	3/12/2012 10:06	7297	6386	911	600-BKGDS1B	6765	
15	3/12/2012 10:07	6897	6386	511	600-BKGDS1B	6765	
16	3/12/2012 10:09	4843	6386	-1543	600-BKGDS1B	6765	
17	3/12/2012 10:10	7133	6386	747	600-BKGDS1B	6765	
18	3/12/2012 10:11	6783	6386	397	600-BKGDS1B	6765	
19	3/12/2012 10:12	7107	6386	721	600-BKGDS1B	6765	
20	3/12/2012 10:14	4194	6386	-2192	600-BKGDS1B	6765	
21	3/12/2012 10:15	5443	6386	-943	600-BKGDS1B	6765	
22	3/12/2012 10:17	5629	6386	-757	600-BKGDS1B	6765	
23	4/20/2012 14:01	7699	6386	1313	600-BKGDS1B	6765	
24	4/20/2012 14:03	7840	6386	1454	600-BKGDS1B	6765	
25	4/20/2012 14:04	7494	6386	1108	600-BKGDS1B	6765	
26	4/20/2012 14:05	6346	6386	-40	600-BKGDS1B	6765	
27	5/1/2012 15:26	4909	6386	-1477	600-BKGDS1B	6765	
28	5/31/2012 14:52	4428	6808	-2380	630-BKGDS1B	8141	
29	5/31/2012 14:54	4992	6808	-1816	630-BKGDS1B	8141	
30	5/31/2012 14:55	6096	6808	-712	630-BKGDS1B	8141	
31	5/31/2012 14:56	5708	6808	-1100	630-BKGDS1B	8141	
32	5/31/2012 14:57	5835	6808	-973	630-BKGDS1B	8141	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: NPR Survey Unit: 1 Class: 1 Area: 803.22 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
33	5/31/2012 14:58	4732	6808	-2076	630-BKGDS1B	8141	
34	5/31/2012 14:59	5221	6808	-1587	630-BKGDS1B	8141	
35	5/31/2012 15:01	4957	6808	-1851	630-BKGDS1B	8141	
36	5/31/2012 15:02	5430	6808	-1378	630-BKGDS1B	8141	
37	5/31/2012 15:03	4940	6808	-1868	630-BKGDS1B	8141	
38	5/31/2012 15:04	5218	6808	-1590	630-BKGDS1B	8141	
39	5/31/2012 15:05	4364	6808	-2444	630-BKGDS1B	8141	
40	5/31/2012 15:06	4760	6808	-2048	630-BKGDS1B	8141	
41	5/31/2012 15:07	4832	6808	-1976	630-BKGDS1B	8141	
42	5/31/2012 15:08	6228	6808	-580	630-BKGDS1B	8141	
43	5/31/2012 15:10	5888	6808	-920	630-BKGDS1B	8141	
44	5/31/2012 15:11	4719	6808	-2089	630-BKGDS1B	8141	
45	5/31/2012 15:12	5024	6808	-1784	630-BKGDS1B	8141	
46	5/31/2012 15:13	5375	6808	-1433	630-BKGDS1B	8141	
47	5/31/2012 15:14	4200	6808	-2608	630-BKGDS1B	8141	

Net Gamma cpm Min: -2608
Summary Avg: -762
 Max: 1454
 St Dev: 1130

Readings > 3σ investigation level are highlighted in blue

* Background ID correlates to instrument reference area background identification number

Gamma measurements > 3σ investigation level are verified by 2360 beta measurements



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02300

Project Name Radiological Site Survey	PO Number N/A	G A M M A S P E C		S R 0 P H A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD. LABORATORY ID		Project Information Section		
Project Location HUNTERS POINT	Project Number 4044-0002									
Sampler Name RAY ROBERSON	Airbill Number N/A									
Project Chemist LISA BIENKOWSKI	Project Chemist Phone 949-758-7592									
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	I I I	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0001-F001-01	3/12/2012	0800	1		S1		<input checked="" type="checkbox"/>			
02NPR-S0001-F002-01	3/12/2012	0805	1		S1		<input checked="" type="checkbox"/>			
02NPR-S0001-F003-01	3/12/2012	0810	1		S1		<input checked="" type="checkbox"/>			
02NPR-S0001-F004-01	3/12/2012	0815	1		S1		<input checked="" type="checkbox"/>			
02NPR-S0001-F005-01	3/12/2012	0820	1		S1		<input checked="" type="checkbox"/>			
02NPR-S0001-F006-01	3/12/2012	0825	1		S1		<input checked="" type="checkbox"/>			
02NPR-S0001-F007-01	3/12/2012	0830	1		S1		<input checked="" type="checkbox"/>	DUP		
02NPR-S0001-F008-01	3/12/2012	0835	1		S1		<input checked="" type="checkbox"/>			
02NPR-S0001-F009-01	3/12/2012	0840	1		S1		<input checked="" type="checkbox"/>			
02NPR-S0001-F010-01	3/12/2012	0845	1		S1		<input checked="" type="checkbox"/>			
02NPR-S0001-F011-01	3/12/2012	0850	1		S1		<input checked="" type="checkbox"/>			
02NPR-S0001-F012-01	3/12/2012	0855	1		S1		<input checked="" type="checkbox"/>			

Relinquished by: (signature) Company RSR	Date 3-12-12 Time 1455	Received by: (signature) Company	LABORATORY INSTRUCTIONS/COMMENTS	SAMPLING COMMENTS NORTH PIER FSS 50-1 BASED 1-2 SYSTEMATIC 3-22
Relinquished by: (signature) Company	Date Time	Received by: (signature) Company	COMPOSITE DESCRIPTION	
Relinquished by: (signature) Company	Date Time	Received by: (signature) Company	SAMPLE CONDITION/ON RECEIPT (FOR LABORATORY) TEMPERATURE, SAMPLE CONDITION: COOLER SEAL	



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02301

Project Name Radiological Site Survey		PO Number N/A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section			
Project Location HUNTERS POINT		Project Number 4044-0002		LABORATORY ID					
Sampler Name RAY ROBERSON		Airtill Number N/A							
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592							
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0001-F013-01	3/12/2012	0900	1		S1				
02NPR-S0001-F014-01	3/12/2012	0915	1		S1				
02NPR-S0001-F015-01	3/12/2012	0920	1		S1				
02NPR-S0001-F016-01	3/12/2012	0925	1		S1				
02NPR-S0001-F017-01	3/12/2012	0930	1		S1				
02NPR-S0001-F018-01	3/12/2012	0935	1		S1				
02NPR-S0001-F019-01	3/12/2012	0940	1		S1				
02NPR-S0001-F020-01	3/12/2012	0945	1		S1				
02NPR-S0001-F021-01	3/12/2012	0950	1		S1				
02NPR-S0001-F022-01	3/12/2012	0955	1		S1				

Relinquished by: (signature)	Date	Received by: (signature)	LABORATORY INSTRUCTIONS/COMMENTS	SAMPLING COMMENTS
Company R S R S	Time 1455	Company	COMPOSITE/DESCRIPTION	
Relinquished by: (signature)	Date	Received by: (signature)	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY TEMPERATURE, SAMPLE CONDITION, COOLER SEAL)	
Company	Time	Company		



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02384

Project Name Radiological Site Survey		PO Number N/A		G A M A S P E C		S R O H A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD. LABORATORY ID		Project Information Section			
Project Location HUNTERS POINT		Project Number 4044-0002		T A T		I I I		COMMENTS		LOCATION		SAMPLE ID	
Sampler Name JOE CUNNINGHAM		Airbill Number N/A		TYPE		LEVEL		Containers		TIME		DATE	
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592		S1		1		1		1040		4/20/2012	
SAMPLE ID		02NPR-S0001-F023-01		S1		1		1		1045		4/20/2012	
02NPR-S0001-F025-01		S1		1		1		1		1050		4/20/2012	
02NPR-S0001-F026-01		S1		1		1		1		1055		4/20/2012	
02NPR-S0001-F023-01		S1		1		1		1		1110		4/20/2012	
02NPR-S0001-F024-01		S1		1		1		1		1115		4/20/2012	
02NPR-S0010-F023-01		S1		1		1		1		1125		4/20/2012	
02NPR-S0010-F024-01		S1		1		1		1		1130		4/20/2012	
02NPR-S0010-F025-01		S1		1		1		1		1135		4/20/2012	

Relinquished by: (signature)		Date		Received by: (signature)		LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS	
Company		Time		Company		COMPOSITE DESCRIPTION		Normal Air FS5	
Relinquished by: (signature)		Date		Received by: (signature)		SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)		SU-1	
Company		Time		Company		TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:		CHARACTERIZATION 23-26	
Relinquished by: (signature)		Date		Received by: (signature)		TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:		SU-7	
Company		Time		Company		TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:		CHARACTERIZATION 25-29	
Relinquished by: (signature)		Date		Received by: (signature)		TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:		SU-10	
Company		Time		Company		TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:		CHARACTERIZATION 25-25	



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02397

Project Name Radiological Site Survey	PO Number N/A	LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section								
Project Location HUNTERS POINT	Project Number 4044-0002	LABORATORY ID [REDACTED]										
Sampler Name Ray Robinson	Airbill Number N/A											
Project Chemist LISA BIENKOWSKI	Project Chemist Phone 949-758-7592											
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	G A M M A S P E C	S R 9 0	A L P H A	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0001-F027-01	5/1/2012	1530			S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			[REDACTED]
02NPR-S0008-F030-01	5/1/2012	1520			S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			[REDACTED]
02NPR-S0008-F031-01	5/1/2012	1525			S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			[REDACTED]
02NPR-S0010-F026-01	5/1/2012	1515			S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			[REDACTED]

Relinquished by: (signature) [Signature]	Date 05-01-12	Received by: (signature) [Signature]	LABORATORY INSTRUCTIONS/COMMENTS	SAMPLING COMMENTS [REDACTED]
Company RSPS	Time 1610	Company CF		DATE FILED (PSS) [REDACTED]
Relinquished by: (signature)	Date	Received by: (signature)	COMPOSITE DESCRIPTION	DATE FILED (PSS) [REDACTED]
Company	Time	Company		DATE FILED (PSS) [REDACTED]
Relinquished by: (signature)	Date	Received by: (signature)	SAMPLE CONDITION (TEMPERATURE, HUMIDITY, STORAGE)	DATE FILED (PSS) [REDACTED]
Company	Time	Company	TEMPERATURE: SAMPLE CONDITION: STORAGE	DATE FILED (PSS) [REDACTED]



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02447

Project Name Radiological Site Survey		PO Number N/A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section	
Project Location HUNTERS POINT		Project Number 4044-0002		LABORATORY ID			
Sampler Name R. Raberson		Airbill Number N/A					
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592					
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	1	1
02NPR-S0001-F028-01	5/31/2012	0800	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
02NPR-S0001-F029-01	5/31/2012	0805	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
02NPR-S0001-F030-01	5/31/2012	0810	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
02NPR-S0001-F031-01	5/31/2012	0815	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
02NPR-S0001-F032-01	5/31/2012	0820	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
02NPR-S0001-F033-01	5/31/2012	0825	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
02NPR-S0001-F034-01	5/31/2012	0830	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
02NPR-S0001-F035-01	5/31/2012	0835	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
02NPR-S0001-F036-01	5/31/2012	0840	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
02NPR-S0001-F037-01	5/31/2012	0845	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
02NPR-S0001-F038-01	5/31/2012	0850	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
02NPR-S0001-F039-01	5/31/2012	0855	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
						COMMENTS	
						LOCATION	
						SAMPLE ID	

Relinquished by: (signature) Company RSR		Date 5-31-12	Received by: (signature) Company C.S.T.	
Relinquished by: (signature)		Time 16:25	Received by: (signature)	
Company		Date	Company	
Relinquished by: (signature)		Time	Received by: (signature)	
Company		Date	Company	

LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS NOT REPER ESS SU-1 SPRINTING 238-474	
COMPOSITE DESCRIPTION			
SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY) TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:			



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02448

Page 1 of 1

Project Name Radiological Site Survey		PO Number N/A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section			
Project Location HUNTERS POINT		Project Number 4044-0002		LABORATORY ID					
Sampler Name R. K. Peterson		Airbill Number N/A							
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592							
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0001-F040-01	5/31/2012	0920	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0001-F041-01	5/31/2012	0925	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0001-F042-01	5/31/2012	0930	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0001-F043-01	5/31/2012	0935	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0001-F044-01	5/31/2012	0940	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0001-F045-01	5/31/2012	0945	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0001-F046-01	5/31/2012	0950	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0001-F047-01	5/31/2012	0955	1		S1	<input checked="" type="checkbox"/>			

Relinquished by: (signature) Company RSES	Date 5-31-12	Received by: (signature) Company C & T	LABORATORY INSTRUCTIONS/COMMENTS COMPOSITE DESCRIPTION SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY) TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:	SAMPLING COMMENTS
Relinquished by: (signature) Company	Time 14:25	Received by: (signature) Company		
Relinquished by: (signature) Company	Date	Received by: (signature) Company		
Relinquished by: (signature) Company	Time	Received by: (signature) Company		
Relinquished by: (signature) Company	Date	Received by: (signature) Company		

\\EGISFOR\PROJECTS\32 CAD FILES (RAD EMAC)\DWG FILES\WORK AREAS\CTO2_WA-32_SURVEY UNITS.DWG
PLOT/UPDATE: SEP 01 09:28:29

1,7, 8, 10



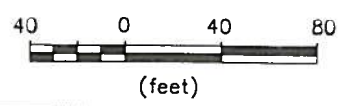
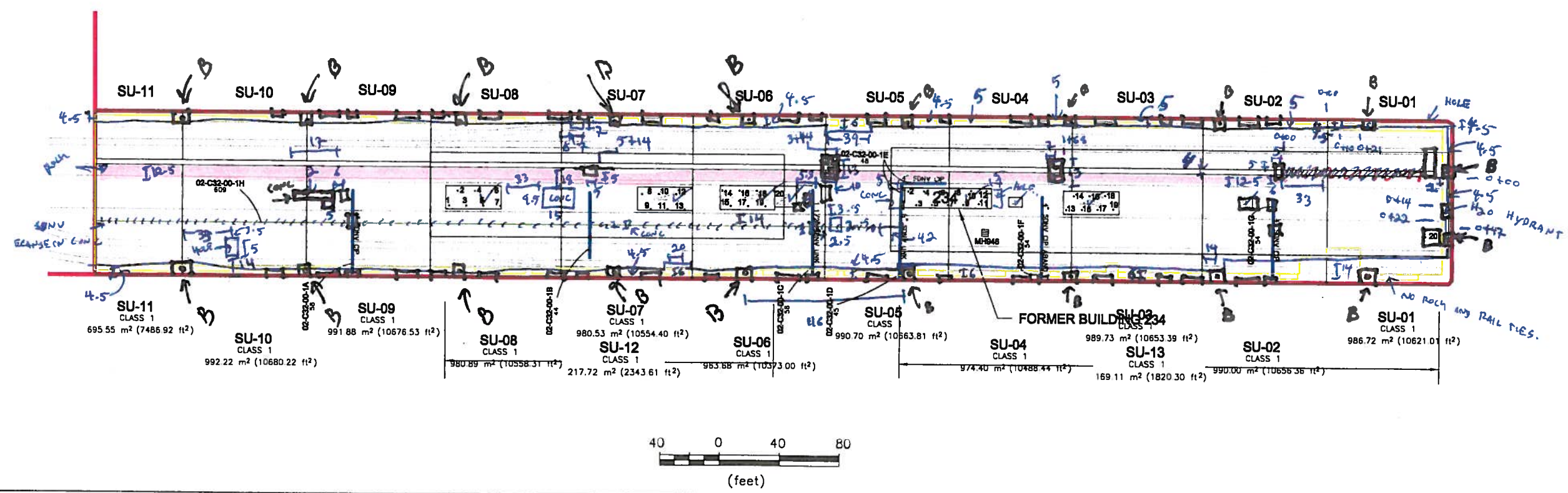
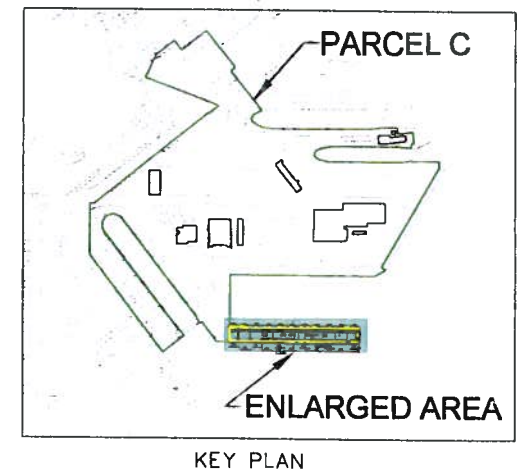
LEGEND

- MH250 - MANHOLE NUMBER
- 15.5 - BOTTOM DEPTH (FEET)
- OR UNK - BOTTOM DEPTH UNKNOWN
- ⑤ OR ⑥ OR ⑦ - PIPE SIZE UNKNOWN
- OR ⑧ - PIPE SIZE AND TYPE
- 0" OR 6" SDNV VCP - STORM PIPES, SANITARY PIPES AND STRUCTURES
- 06-B02-00-1A - TRENCH ID WITH DISTANCE (DISTANCE IN FEET)
- 42 - TRENCH ID WITH DISTANCE (DISTANCE IN FEET)
- IR BOUNDARY
- PARCEL BOUNDARY
- WORK AREA BOUNDARY
- SANITARY SEWER LINE
- STORM DRAIN LINE
- FLOW DIRECTION (TYP)

- SSNV - SANITARY SEWER LINE
- SDNV - STORM DRAIN LINE
- UNK - UNKNOWN
- VCP - VITRIFIED CLAY PIPE
- CIP - CAST IRON PIPE
- CONC - CONCRETE
- ABAND - ABANDONED
- PRF - PERFORATED
- CMP - CORRUGATED METAL PIPE
- RCP - REINFORCED CONCRETE PIPE
- PVC - POLYVINYL CHLORIDE
- 228 - BUILDINGS W/10 FOOT BUFFER
- 241 - IMPACTED BUILDINGS
- IR09MW63A - MONITORING WELL
- IR09MW63A - MONITORING WELL TO BE IMPACTED

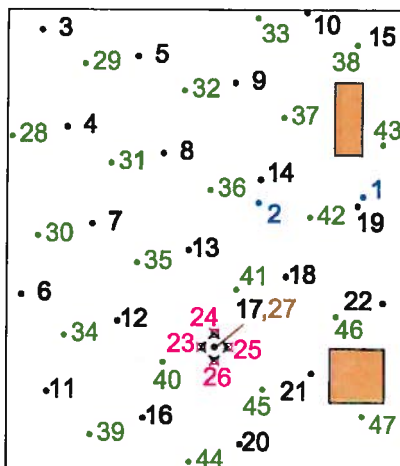
TRENCH ID

- XX-XXX-XX-XX - SEGMENT NO.
- IR SITE ID, 00 IF NON-IR SITE
- WORK/BLDG AREA
- CTO OR TO NUMBER



REVISION 0 ORIGINALLY SIGNED/STAMPED BY TIMOTHY Y. LAI CALIFORNIA PE NO. C57179 DATE ORIGINAL SIGNED NOVEMBER 22, 2010		REVISION 0 COPY IS STORED IN TETRA TECH EC PROJECT FILES	
APPROVED	DATE	REV	NO
RESPONSIBLE ENGINEER: T. LAI DRAWN BY: S. NO CHECKED BY: T. LAI PROJECT ENGINEER: T. LAI SCALE: AS SHOWN SHEET SIZE: D		DESCRIPTION	
HUNTERS POINT SHIPYARD SAN FRANCISCO, CA 94108 200 FISHER AVE., SAN FRANCISCO, CA 94108		TECHNICAL INC. 1350 JARVIS STREET, SUITE 750 SAN DIEGO, CA 92101 TEL: (619) 234-8680 FAX: (619) 234-8591	
DESIGN PLAN - PARCEL C		SANITARY SEWER AND STORM DRAIN REMOVAL WORK AREA 32	
DRAWING NO. CTO2_WA-32		REVISION: 1 of 1	

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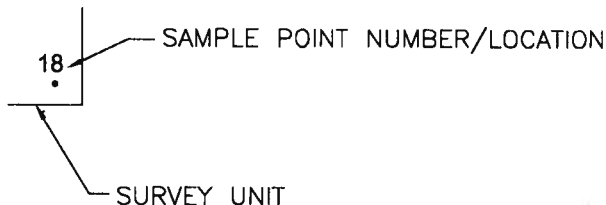
LEGEND:

- 1 BIASED 1-2
- 3 SYSTEMATIC 1 3-22
- ✖ 23 CHARACTERIZATION 23-26
- 27 POST-REMEDIAATION 27
- 28 SYSTEMATIC 2 28-47
- CONCRETE
- △ AREAS PREVIOUSLY REMEDIATED

SU-01

CLASS 1

803.22 m² (8645.87 ft²)



RECORD COPY

SCALE 1:40

HUNTERS POINT SHIPYARD
SAN FRANCISCO, CA
 P.O. BOX 884836
 SAN FRANCISCO, CA 94188

NORTH PIER WA-32
SURVEY UNIT 01



TETRA TECH EC, INC

1230 COLUMBIA STREET, SUITE 750
 SAN DIEGO, CA 92101

TEL: (619) 234-8690 FAX: (619) 234-8591

Chiu, George

From: Chiu, George
Sent: Monday, July 16, 2012 10:25 AM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - North Pier Survey Unit 01
Attachments: 02NPR-S0001 028 to 047 Off-Site Gamma.pdf; 02NPR-S0001 Pu and Sr.pdf

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the off-site gamma spec, strontium, and plutonium results for the systematic samples from North Pier Survey Unit 01.

George Chiu | Health Physicist
Office: 415.216.2745 | Cell: 714.270.4009
george.chiu@tetrattech.com

Radiological Survey & Remedial Services
100 Washington Street Suite 200 | Reno, NV 89503
www.radsvcs.com

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Think Green - Not every email needs to be printed.

From: Chiu, George
Sent: Wednesday, June 06, 2012 11:42 AM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - North Pier Survey Unit 01

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the on-site systematic sampling results from North Pier Survey Unit 01. Samples 29, 33, and 33DUP were recounted for a longer duration at the direction of the laboratory manager.

According to the TSP for North Pier, 100% of the final systematic will be analyzed by gamma spectroscopy at a DoD ELAP approved laboratory. Additionally, 10% of the final systematic will be analyzed for total strontium and Pu-239.

George Chiu | Health Physicist
Office: 415.216.2745 | Cell: 714.270.4009
george.chiu@tetrattech.com

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From: Chiu, George

Sent: Friday, May 11, 2012 9:23 AM

To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)

Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan

Subject: HPS Data - North Pier Survey Unit 01

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the post-remediation sampling results from North Pier Survey Unit 01.

We will proceed with the systematic sampling of this survey unit.

George Chiu | Health Physicist
Office: 415.216.2745 | Cell: 714.270.4009
george.chiu@tetrattech.com

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100 Washington Street Suite 200 | Reno, NV 89503
www.radsvcs.com

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From: Chiu, George

Sent: Thursday, April 26, 2012 12:41 PM

To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)

Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan

Subject: HPS Data - North Pier Survey Unit 01

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the characterization sampling results from North Pier Survey Unit 01.

We will proceed with remediation followed by post-remediation sampling.

George Chiu | Health Physicist
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george.chiu@tetrattech.com

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Think Green - Not every email needs to be printed.

From: Chiu, George

Sent: Sunday, March 18, 2012 12:18 PM

To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)

Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan

Subject: HPS Data - North Pier Survey Unit 01

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the on-site bias and systematic sampling results from North Pier Survey Unit 01. Samples 01, 08, 11, and 17 were recounted for a longer duration at the direction of the laboratory manager. Also attached are the gamma scans, statics, and exposure rate measurements.

We will proceed with characterization/remediation around sample point 17 (1.733 pCi/g) due to radium-226 activity.

George Chiu | Health Physicist

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Radiological Survey & Remedial Services

100 Washington Street Suite 200 | Reno, NV 89503

www.radsvcs.com

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TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: March 12, 2012

RAD EMAC – CTO 002

Overview

The HPNS Team continued field activities for the North Pier and Work Areas #32, #33, and #35. Details of the work activities performed are provided in the sections below.

North Pier

- Survey activities were performed by the HPNS Team on wooden railroad ties (Survey No. HPS-A-NPR-028); a total of 36 swipe samples were collected and submitted to the on-site laboratory for analysis.
- The HPNS Team performed Class 1 survey activities as follows:
 - Survey Unit 1 – A total of 2 biased and 20 systematic gamma static measurements were logged with a maximum measurement of 7,456 cpm. In addition, 22 soil samples were collected and submitted to the on-site laboratory for analysis.
 - Survey Unit 2 – A total of 2 biased and 20 systematic gamma static measurements were logged with a maximum measurement of 7,396 cpm. In addition, 22 soil samples were collected and submitted to the on-site laboratory for analysis.
- The RSO is in the process of reviewing the survey data for Survey Units 1 and 2.
- The RSOR provided the HPNS Team with survey results for the wooden railroad ties detailed in Survey No. HPS-A-NPR-027. Because no activity above the release criteria was identified, the 36 items were released for transfer to the recycling stockpiles.
- Surveyed and released metal rail track and wooden railroad ties (Survey Nos. HPS-A-NPR-026 and HPS-A-NPR-027) were transferred to the recycling bins and stockpiles near Building 411.
- The HPNS Team issued drawings to identify locations for biased and systematic sample collection in Class 1 Survey Unit 11.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

- Backfill activities were initiated completed in Trench Unit No. 194 by the HPNS Team.
- A variety of housekeeping activities were performed throughout Parcel C by the HPNS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report



TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: March 12, 2012

RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

- The HPNS Team performed the following RSY4 processing activities:
 - One truckload of material was received for processing.
 - ES Units 0643 and 0646 were staged in the stockpile area pending receipt of the off-site analytical results.

On-Site and Off-Site Laboratories

- On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:
 - Soil samples received for gamma spectroscopy analysis: 58
 - Swipe samples received for Protean counts: 108
 - Air samples received: 7
 - Samples analyzed by gamma spectroscopy: 48
 - Gamma spectroscopy samples recounted: 43
 - Protean swipe samples counted: 36
 - Protean air samples counted: 6
- A total of 267 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.

Basewide Support

- Portal Monitor Activities
 - A total of five empty trucks entered HPNS through the portal monitor with no alarms.
 - A total of seven truckloads of material exited HPNS through the portal monitor with no alarms.
- A total of nine incoming materials and equipment surveys were performed by the HPNS Team.



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel E and Building 500 Series Removal Action

Report Date: March 12, 2012	RMAC – CTO 07
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Overview

The HPNS Team continued field activities for the Buildings 506 and 518 Sites, Shacks 79 and 80, the 500 Series Area, and Work Area #36. Details of the activities performed are provided in the sections below.

Building 506 Site

- The HPNS Team provided the RASO with on-site analytical and survey results for the systematic samples collected from Class 1 Survey Unit 5. Because no activity above the release criteria was identified, the systematic samples will be submitted to the off-site laboratory for analysis.

Building 518 Site

- The HPNS Team performed survey activities for the former Building 518 foundation (located in the 500 Series Area Survey Unit 13). A total of 14 investigative gamma static measurements were logged with a maximum measurement of 6,882 cpm. In addition, 14 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

Shacks 79 and 80

- The HPNS Team provided the RASO with analytical results for the characterization samples collected from Class 1 Survey Unit 1. Because no activity above the release criteria was identified, remediation and post-remediation sample collection will be performed.

500 Series Area

- The HPNS Team transferred approximately 12 cubic yards of excavated sand/soil material from Survey Unit 13 to RSY4 pending survey activities.
- Survey activities were performed by the HPNS Team on concrete debris generated during sand/soil removal in Survey Unit 13 (Survey Nos. HPS-A-500SA-040 and HPS-A-500SA-041); a total of 72 swipe samples were collected and submitted to the on-site laboratory for analysis.

- The RSOR provided the HPNS Team with survey results for the concrete debris generated during sand/soil removal in Survey Unit 13 and detailed in Survey No. HPS-A-500SA-039. Because no activity above the release criteria was identified, the 36 items were released for transfer to the recycling stockpiles near Building 411.
- The HPNS Team provided the RASO with on-site analytical and survey results for the biased and systematic samples collected from Class 1 Survey Unit 3. Characterization and remediation will be performed due to the presence of ^{226}Ra contamination as follows:
 - Sample Point 2 (07500SA-S0003-F002-01) with ^{226}Ra at 1.774 pCi/g
 - Sample Point 3 (07500SA-S0003-F003-01) with ^{226}Ra at 2.263 pCi/g
 - Sample Point 4 (07500SA-S0003-F004-01) with ^{226}Ra at 1.846 pCi/g
 - Sample Point 6 (07500SA-S0003-F006-01) with ^{226}Ra at 2.015 pCi/g
 - Sample Point 9 (07500SA-S0003-F009-01) with ^{226}Ra at 1.664 pCi/g
 - Sample Point 11 (07500SA-S0003-F011-01) with ^{226}Ra at 1.815 pCi/g
 - Sample Point 18 (07500SA-S0003-F018-01) with ^{226}Ra at 1.806 pCi/g
 - Sample Point 24 (07500SA-S0003-F024-01) with ^{226}Ra at 1.667 pCi/g
 - Sample Point 25 (07500SA-S0003-F025-01) with ^{226}Ra at 2.01 pCi/g
 - Sample Point 27 (07500SA-S0003-F027-01) with ^{226}Ra at 1.876 pCi/g
 - Sample Point 37 (07500SA-S0003-F037-01) with ^{226}Ra at 1.849 pCi/g
- The HPNS Team provided the RASO with analytical results for the characterization samples collected from Class 1 Survey Unit 15. Because no activity above the release criteria was identified, remediation and post-remediation sample collection will be performed.
- A truckload of brush and vegetation were manually scanned followed by screening through the HPNS portal monitor with no alarms; the debris was staged near Building 411 pending off-site disposal or recycling.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- The HPNS Team provided the RASO with analytical results for the sediment sample collected from a pipe excavated from trench segment 07-E36-00-4M (07-PEPI-0027-01); no activity above the release criteria was identified.
- The HPNS Team issued Figures 1-1/3-1 for inclusion in the Internal Draft SUPRs for Trench Unit Nos. 225 and 228.
- A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: April 20, 2012

RAD EMAC – CTO 002

Overview

The HPNS Team continued field activities for the North Pier and Work Areas #32 and #34. Details of the work activities performed are provided in the sections below.

North Pier

- The HPNS Team performed Class 1 survey activities as follows:
 - Survey Unit 1 – A total of four characterization gamma static measurements were logged with a maximum measurement of 7,840 cpm. In addition, four soil samples were collected and submitted to the on-site laboratory for analysis.
 - Survey Unit 7 – A total of two characterization gamma static measurements were logged with a maximum measurement of 6,087 cpm. In addition, two soil samples were collected and submitted to the on-site laboratory for analysis.
 - Survey Unit 8 – A total of seven characterization gamma static measurements were logged with a maximum measurement of 6,911 cpm. In addition, seven soil samples were collected and submitted to the on-site laboratory for analysis.
 - Survey Unit 10 – A total of three characterization gamma static measurements were logged with a maximum measurement of 6,691 cpm. In addition, three soil samples were collected and submitted to the on-site laboratory for analysis.
- The RSO is in the process of reviewing the survey data for Survey Units 1, 7, 8, and 10.
- The HPNS Team issued drawings to identify locations for characterization sample collection in Class 1 Survey Unit 8.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

- The HPNS Team excavated approximately 156 cubic yards of soil from Work Area #32 and transferred the material to RSY4 for processing. Excavation activities were performed for the following trench segments:
 - 02-C32-00-1D 45 linear feet completed
 - 02-C32-00-1E 6 linear feet completed
 - 02-C32-00-1F 44 linear feet completed
 - 02-C32-00-1J 12 linear feet completed

- 02-C32-00-1K 15 linear feet completed
- 02-C32-00-8D 62 linear feet completed
- 02-C32-00-8H 50 linear feet completed
- A total of 122 linear feet of trench (including excavated soil, manholes, and pipes) identified on the design drawings and 112 linear feet not identified on the design drawings were completed by the HPNS Team.
- Manholes MH946, MH1334, MH1335 and MH1336 along and pipes excavated from trench segments 02-C32-00-1D, -1E, -1F, -1J, -1K, -8D, and -8H were placed on plastic pending further activities.
- The HPNS Team investigated the entire trench segment 02-C32-00-1F for the presence of pipe. Although depicted on the design drawing, no pipe was found during this investigation.
- A total of two sediment samples were collected from excavated Manholes MH946 (02-PCMH946-064-01) and MH1336 (02-PCMH1336-063-01) by the HPNS Team and submitted to the on-site laboratory for analysis.
- The RSOR provided the HPNS Team with survey results for the excavated manholes and pipe sections detailed in Survey Nos. HPS-PCPIPE-041312-051, HPS-PCPIPE-041312-052, and HPS-PCPIPE-041612-053. Because no activity above the release criteria was identified, these 17 manholes and 11 pipe sections were released for transfer to the recycling stockpiles near Building 411.
- Metal rail track encountered during Work Area #32 trench excavations was sized and staged for transfer to the recycling bins near Building 411.
- A variety of housekeeping activities were performed throughout Parcel C by the HPNS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report



TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: April 20, 2012

RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

- The HPNS Team performed towed array survey activities for ES Units 0686 and 0687 at RSY3.
- The HPNS Team performed the following RSY4 processing activities:
 - A total of 13 truckloads of material were received for processing.
 - Towed array survey activities were performed for ES Units 0645, 0678, 0681, 0683, 0692, and 0693.
 - ES Units 0659 and 0674 were staged in the stockpile area pending receipt of the off-site analytical results.
 - Began transfer of ES Unit 0675 to the stockpile area.
- The HPNS Team continued radiological monitoring and control activities for the RSYs including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring, as appropriate.

On-Site and Off-Site Laboratories

- On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:
 - Soil samples received for gamma spectroscopy analysis: 36
 - Swipe samples received for Protean counts: 128
 - Air samples received: 10
 - Samples analyzed by gamma spectroscopy: 25
 - Gamma spectroscopy samples recounted: 5
 - Protean swipe samples counted: 40
 - Protean air samples counted: 10
- A total of 188 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel E and Building 500 Series Removal Action

Report Date: April 20, 2012	RMAC – CTO 07
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Overview

The HPNS Team continued field activities for Shacks 79 and 80, the 500 Series Area, and Work Area #36. Details of the activities performed are provided in the sections below.

Shacks 79 and 80

- The HPNS Team performed Class 1 survey activities for Survey Unit 1. A total of two systematic gamma static measurements were logged with a maximum measurement of 5,807 cpm. In addition, two soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

500 Series Area

- The HPNS Team exposed asphalt and continued soil grading and debris removal in preparation for towed array surveys in Class 2 Survey Unit 23.
- Asphalt covering Survey Unit 23 (near Building 505) was removed, scanned, and staged within the Class 2 survey boundaries; no elevated readings were identified during the scanning activities.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: May 1, 2012	RAD EMAC – CTO 002
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Overview

The HPNS Team continued field activities for the North Pier and Work Areas #31, #32, and #34. Details of the work activities performed are provided in the sections below.

North Pier

- The HPNS Team performed Class 1 survey activities as follows:
 - Survey Unit 1 – A post-remediation gamma static measurement was logged at 4,909 cpm and one soil sample was collected and submitted to the on-site laboratory for analysis.
 - Survey Unit 8 – A total of two post-remediation gamma static measurements were logged with a maximum measurement of 7,183 cpm. In addition, two soil samples were collected and submitted to the on-site laboratory for analysis.
 - Survey Unit 10 – A post-remediation gamma static measurement was logged at 8,245 cpm and one soil sample was collected and submitted to the on-site laboratory for analysis.
 - Survey Unit 11 – A total of three characterization gamma static measurements were logged with a maximum measurement of 5,612 cpm. In addition, three soil samples were collected and submitted to the on-site laboratory for analysis.
- The RSO is in the process of reviewing the survey data for Survey Units 1, 8, 10, and 11.
- The HPNS Team provided the RASO with on-site analytical results for the characterization samples collected from Class1 Survey Unit 7. Because no activity above the release criteria was identified, remediation followed by post-remediation sample collection will be performed.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

- Radiologically surveyed and released excavated manholes (Survey Nos. HPS-PCPIPE-121211-040 and HPS-PCPIPE-041612-053) were transferred to stockpiles near Building 411 pending off-site disposal or recycling.
- Backfill activities were initiated for Trench Unit No. 236 by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report



TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: May 01, 2012

RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

- The HPNS Team received a total of six truckloads of material at RSY3 for processing.
- The HPNS Team performed the following RSY4 processing activities:
 - A total of 11 truckloads of material were received for processing.
 - Issued drawing to identify biased and systematic sample collection locations for ES Unit 0685.
 - A total of 5 biased and 18 systematic soil samples were collected from ES Unit 0695 and submitted to the on-site laboratory for analysis.
- The HPNS Team continued radiological monitoring and control activities for the RSYs including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring, as appropriate.
- The HPNS Team provided the RASO with the following:
 - On-site analytical data for ES Unit 0678 and a request for concurrence to stage the material pending receipt of the off-site analytical results prior to transferring to the DON non-LLRW contactor for off-site disposal at a CERCLA landfill.
 - On-site analytical data for ES Units 0683 and 0687 along with requests for concurrence to stage the materials pending receipt of the off-site analytical results.

Basewide Support

- Radiological support was provided to CKY by the HPNS Team during landscaping activities at Parcel E-2.

On-Site and Off-Site Laboratories

- On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:
 - Soil samples received for gamma spectroscopy analysis: 30
 - Swipe samples received for Protean counts: 152
 - Air samples received: 13
 - Samples analyzed by gamma spectroscopy: 87
 - Gamma spectroscopy samples recounted: 8
 - Protean swipe samples counted: 23
 - Protean air samples counted: 13
- A total of 323 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.
- A total of 119 samples were sent to TestAmerica St. Louis for analysis.



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel E and Building 500 Series Removal Action

Report Date: May 1, 2012	RMAC – CTO 07
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Overview

The HPNS Team continued field activities for the Building 707 Triangle, the 500 Series Area, and Work Areas #21 and #36. Details of the activities performed are provided below.

Building 707 Triangle

- A total of 49 cubic yards of soil were remediated from Class 1 Survey Units 21 and 22 by the HPNS Team and placed in LLRW bins AWIU000261, ERRU000145, and GFLU001030T1 for off-site disposal.
- The HPNS Team performed Class 1 survey activities as follows:
 - Asphalt Grid A7 – A total of 550 alpha/beta scan readings were logged. The preliminary data indicates the presence of beta activity above the release limit in one scan reading logged at 1,100 dpm/100 cm².
 - Survey Unit 22 – A total of four post-remediation gamma static measurements were logged with maximum measurements of 194 cpm (FIDLER) and 5,034 cpm. In addition, two soil samples were collected and submitted to the off-site laboratory for total strontium analysis.
- The RSO is in the process of reviewing the survey data for Asphalt Grid A7 and Survey Unit 22.

500 Series Area

- The HPNS Team provided the RASO with on-site analytical results for the characterization samples collected from Class 1 Survey Units 13, 16, and 18. Because no activity above the release criteria was identified, remediation followed by post-remediation sample collection activities will be performed.
- The HPNS Team provided the RASO with on-site analytical results for the biased and systematic samples collected from Class 1 Survey Unit 14. Characterization and remediation will be continued due to the presence of ¹³⁷Cs contamination as follows:
 - Sample Point 7 (07500SA-S0014-F007-01) with ¹³⁷Cs at 0.1183 pCi/g
 - Sample Point 17 (07500SA-S0014-F017-01) with ¹³⁷Cs at 0.2425 pCi/g
 - Sample Point 37 (07500SA-S0014-F037-01) with ¹³⁷Cs at 0.3768 pCi/g

- The HPNS Team provided the RASO with on-site analytical results for the additional characterization samples collected from Class 1 Survey Units 19 and 21. Because no activity above the release criteria was identified, no further remediation will be performed in these survey units.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- The HPNS Team excavated approximately 204 cubic yards of soil from Work Area #36 and transferred materials to both RSY3 and RSY4 for processing. Excavation activities were performed for the following trench segments:
 - 07-E36-00-7F 133 linear feet completed
 - 07-E36-00-7G 10 linear feet completed
 - 07-E36-00-7H 12 linear feet completed
 - 07-E36-00-7I 6 linear feet completed
 - 07-E36-00-8Y 25 linear feet completed
- A total of 161 linear feet of trench (including excavated soil, a manhole, and pipes) identified on the design drawings and 25 linear feet not identified on the design drawings were completed by the HPNS Team.
- Excavated Manhole MH1244 was placed on plastic pending further activities.
- The HPNS Team provided the RASO with analytical results for the sediment samples collected from Manholes MH1302 and MH1303. Both manholes will be placed in LLRW bins for off-site disposal due to the presence of ^{137}Cs contamination as follows:
 - Manhole MH1302 (07-PEMH1302-013-01) with ^{137}Cs at 0.2161 pCi/g
 - Manhole MH1303 (07-PEMH1303-014-01) with ^{137}Cs at 0.1319 pCi/g
- The HPNS Team provided the RASO with analytical results for the investigative samples collected from Trench Unit No. 249. Characterization and remediation will be performed due to the presence of ^{137}Cs contamination at Sample Point 17 (0.2726 pCi/g).
- The HPNS Team provided the RASO with analytical results for the systematic samples collected from Trench Unit No. 248; no activity above the release criteria was identified.
- A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: May 31, 2012

RAD EMAC – CTO 002

Overview

The HPNS Team continued field activities for Buildings 211, 231, and 253; the North Pier; and Work Areas #32 through #35. Details of the work activities performed are provided below.

North Pier

- The HPNS Team performed Class 1 survey activities as follows:
 - Survey Unit 1 – A total of 20 systematic gamma static measurements were logged with a maximum measurement of 6,227 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis.
 - Survey Unit 8 – A total of 20 systematic gamma static measurements were logged with a maximum measurement of 6,104 cpm and 20 soil samples were collected and submitted to the on-site laboratory for analysis.
 - Survey Unit 10 – A total of 20 systematic gamma static measurements were logged with a maximum measurement of 6,110 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis.
 - Survey Unit 11 – A total of 20 systematic gamma static measurements were logged with a maximum measurement of 6,599 cpm and 20 soil samples were collected and submitted to the on-site laboratory for analysis.
- The RSO is in the process of reviewing the survey data for Survey Units 1, 8, 10, and 11.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

- A total of 18 systematic samples were collected from Trench Unit No. 304 (associated with the North Pier) by the HPNS Team and submitted to the on-site laboratory for analysis.
- Backfill activities were continued for Trench Unit No. 238 (associated with Buildings 211, 231, and 253) by the HPNS Team.
- The HPNS Team and the RASO concurred on backfilling of Trench Unit No. 242.
- The HPNS Team issued an updated Parcel C Trench Survey Unit Key Plan and Figures 1-1/3-1 for inclusion in the Internal Draft SUPR for Trench Unit No. 302.
- Site restoration activities were performed by the HPNS Team over backfilled trench units in Work Area #33.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report



TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: May 31, 2012

RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

- The HPNS Team received a total of 13 truckloads of material at RSY3 for processing.
- The HPNS Team performed the following RSY4 processing activities:
 - A total of 13 truckloads of material were received for processing.
 - Began transfer of ES Unit 0700 to the stockpile area.
- The HPNS Team provided the RASO with the off-site laboratory analytical results for ES Unit 0686 and a request for concurrence to use the materials as trench backfill.
- The HPNS Team continued radiological monitoring and control activities for the RSYs including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring, as appropriate.
- After evaluating the data, the RASO concurred with the following:
 - Transferring ES Unit 0678 to the DON non-LLRW contractor for off-site disposal at a CERCLA landfill.
 - Reuse of ES Units 0658, 0685, 0687, and 0688 as trench backfill.

Basewide Support

- One outgoing materials and equipment survey was performed by the HPNS Team.

On-Site and Off-Site Laboratories

- On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:
 - Soil samples received for gamma spectroscopy analysis: 140
 - Swipe samples received for Protean counts: 151
 - Air samples received: 13

- Samples analyzed by gamma spectroscopy: 76
- Gamma spectroscopy samples recounted: 13
- Protean swipe samples counted: 20
- Protean air samples counted: 16
- A total of 227 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.
- A total of 71 samples were sent to TestAmerica St. Louis for analysis.



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: May 31, 2012

RMAC – CTO 07

Overview

The HPNS Team continued field activities for the Building 520 Site, the 500 Series Area, and Work Area #36. Details of the activities performed are provided in the sections below.

Building 520 Site

- The HPNS Team provided the RASO with off-site analytical results for the systematic samples collected from Class I Survey Unit 4. Characterization and remediation will be performed due to the presence of ^{90}Sr contamination at Sample Point 61 (0.365 pCi/g).

500 Series Area

- The HPNS Team continued soil grading and debris removal in preparation for upcoming survey activities in Class 2 Survey Units 22 and 23.
- The HPNS Team performed Class 1 survey activities for Survey Unit 17. A total of six characterization gamma static measurements were logged with a maximum measurement of 6,340 cpm. In addition, six soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPNS Team provided the RASO with total strontium analytical results for the ^{137}Cs contaminated samples collected from Class 1 Survey Unit 17; no further contamination was identified.
- The HPNS Team issued drawings to identify locations for characterization sample collection in Class 1 Survey Unit 17.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- The HPNS Team excavated approximately 312 cubic yards of soil from Work Area #36 and transferred the material to both RSY3 and RSY4 for processing. Excavation activities were performed for the following trench segments:
 - 07-E36-00-4D 10 linear feet completed
 - 07-E36-00-4E 51 linear feet completed
 - 07-E36-00-4F 5 linear feet completed
 - 07-E36-00-4G 27 linear feet completed
 - 07-E36-38-1U 35 linear feet completed

- 07-E36-38-1V 39 linear feet completed
 - 07-E36-38-1W 38 linear feet completed
 - 07-E36-38-2B 17 linear feet completed
 - 07-E36-38-4A 9 linear feet completed
 - 07-E36-38-5A 10 linear feet completed
- A total of 241 linear feet of trench (including excavated soil, manholes, and pipes) identified on the design drawings was completed by the HPNS Team.
 - Excavated Manholes MH1257, MH1261, MH1266, and MH1267 were placed on plastic pending further activities.
 - The HPNS Team investigated trench segment 07-E36-38-1U for the presence of pipe. Although depicted on the design drawing, no pipe was found during the investigation.
 - A total of four sediment samples were collected from excavated Manholes MH1257, MH1261, MH1266, and MH1267 (MH0016 through MH0019) by the HPNS Team and submitted to the on-site laboratory for analysis.
 - Survey activities were performed by the HPNS Team for pipe sections removed from trench segment 07-E36-39-1R (Survey No. HPS-PEPIPE-053112-048). During the survey activities, a total of six swipe samples were collected and submitted to the on-site laboratory for analysis.
 - Survey activities were performed by the HPNS Team on concrete pipe bedding material removed from Trench Unit No. 307 (Survey No. HPS-A-TU307-001). During the survey activities, a total of eight swipe samples were collected and submitted to the on-site laboratory for analysis.
 - The HPNS Team issued an updated Parcel E Trench Survey Unit Key Plan and Figures 1-1/3-1 for inclusion in the Internal Draft SUPR for Trench Unit No. 301.
 - A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

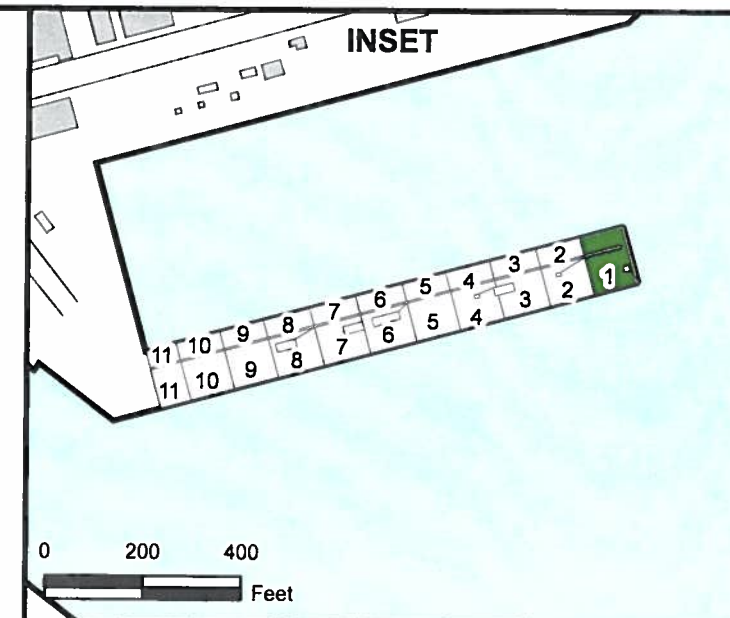
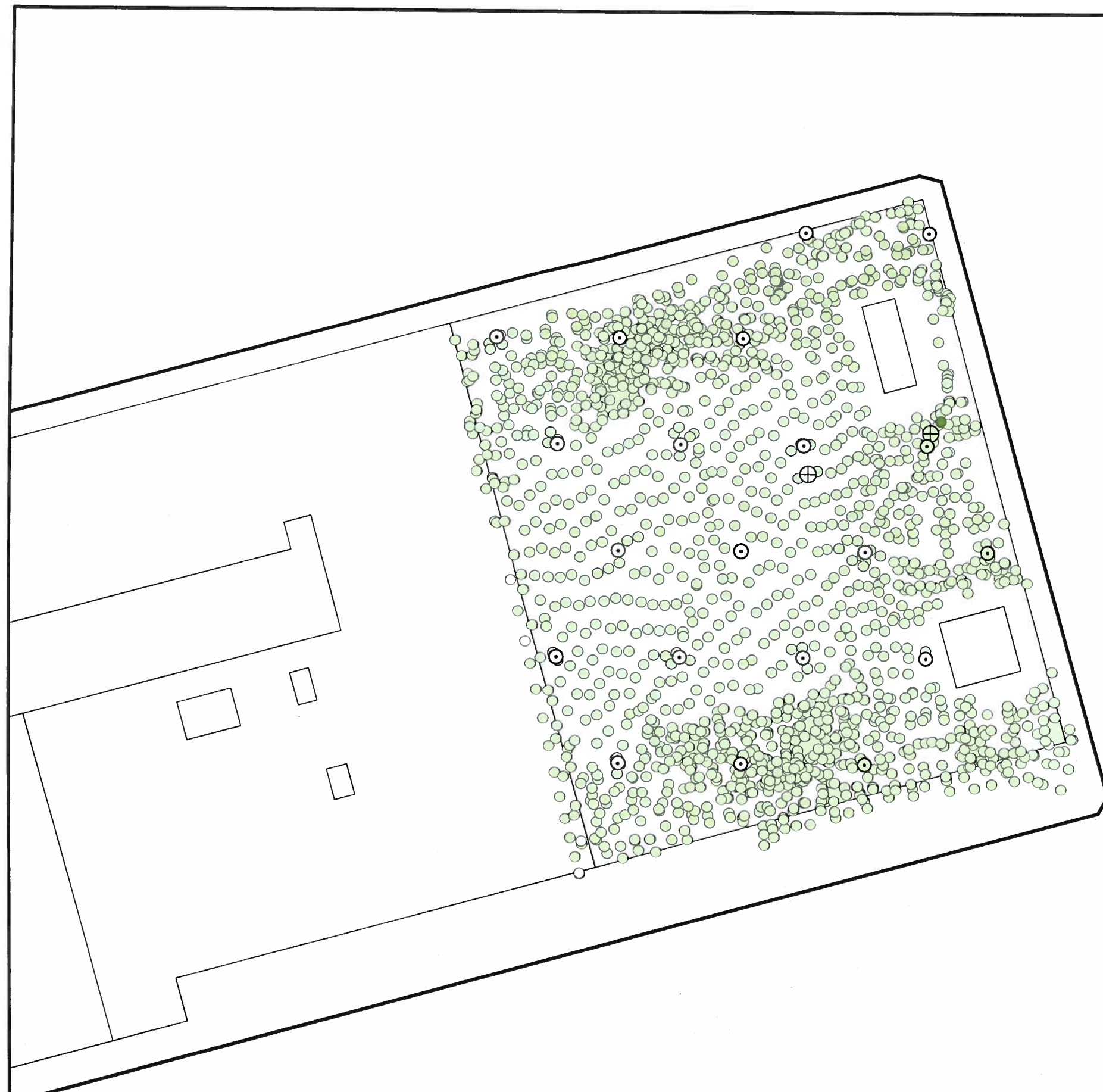
Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report

Highlighted Activities: Ra-226 ≥ 1.633 (On-site) & 1.375 (Off-site) ; Cs-137 ≥ 0.113 ; Bi-214 ≥ 1.485 ; Pb-214 ≥ 1.485 (pCi/g)

1.485 (pCi/g)

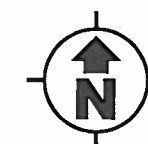
NAME	STREET	CITY	STATE	ZIP
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LEGEND

- GAMMA TOTAL, <1 SIGMA
- GAMMA TOTAL, ≥1 AND <2 SIGMA
- GAMMA TOTAL, ≥2 AND <3 SIGMA
- GAMMA TOTAL, ≥3 AND <4 SIGMA
- GAMMA TOTAL, ≥4 AND <5 SIGMA
- GAMMA TOTAL, ≥5 AND <6 SIGMA
- GAMMA TOTAL, ≥6 SIGMA
- ⊕ BIAS SAMPLE
- ⊙ SYSTEMATIC SAMPLE
- ROAD
- 400 BUILDING
- SCREENING PAD
- WATER

10 0 10 20
Feet
Scale: 1" = 20'



BASE REALIGNMENT AND CLOSURE
PROGRAM MANAGEMENT OFFICE WEST
SAN DIEGO, CALIFORNIA

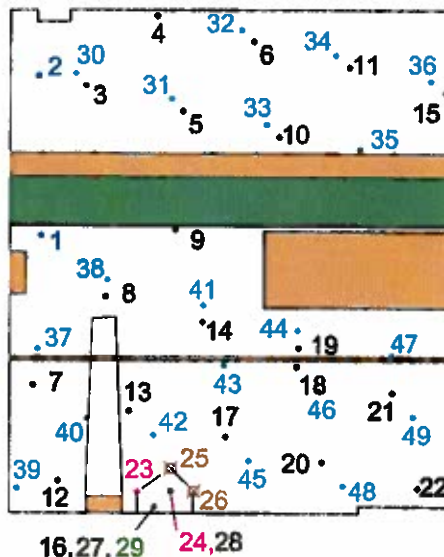
SU-01
North Pier
02/22/2012

HUNTERS POINT SHIPYARD
SAN FRANCISCO, CALIFORNIA

REVIEW: 0
AUTHOR: TJS
DCN: ECSD-XXXX-XXXX-XXXX
FILE NUMBER: NorthPier-SU01.mxd



P:\CTO-02 CAD FILES (RAD EMAC)\DWG FILES\B_WORK AREA 32 TSP\CTO2_WA-32_SURVEY UNITS.DWG
 PLOT/UPDATE: JUN 04 2012 10:36:42



SU-07

CLASS 1

771.47 m² (8304.08 ft²)

LEGEND:

- 1 BIASED 1-2
- 3 SYSTEMATIC 1 3-22
- 23 CHARACTERIZATION 23-24
- 25 CHARACTERIZATION 2 25-26
- 27 POST-REMEDIATION 27-28
- 29 POST-REMEDIATION 2 29
- 30 SYSTEMATIC 2 30-49



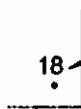
PREVIOUSLY REMEDIATED AREA



ROCK



CONCRETE



SAMPLE POINT NUMBER/LOCATION



SURVEY UNIT

RECORD COPY

SCALE 1:40

HUNTERS POINT SHIPYARD
 SAN FRANCISCO, CA
 P.O. BOX 884836
 SAN FRANCISCO, CA 94188

NORTH PIER WA-32
SURVEY UNIT 07



TETRA TECH EC, INC
 1230 COLUMBIA STREET, SUITE 750
 SAN DIEGO, CA 92101
 TEL: (619) 234-8690 FAX: (619) 234-8591



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: NPR Survey Unit: 7 Class: 1 Area: 771.47 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1	3/19/2012 10:06	5024	6386	-1362	600-BKGDS1B	6765	
2	3/19/2012 10:08	5287	6386	-1099	600-BKGDS1B	6765	
3	3/19/2012 10:09	5256	6386	-1130	600-BKGDS1B	6765	
4	3/19/2012 10:10	5382	6386	-1004	600-BKGDS1B	6765	
5	3/19/2012 10:11	5465	6386	-921	600-BKGDS1B	6765	
6	3/19/2012 10:12	4579	6386	-1807	600-BKGDS1B	6765	
7	3/19/2012 10:14	3561	6386	-2825	600-BKGDS1B	6765	
8	3/19/2012 10:15	5025	6386	-1361	600-BKGDS1B	6765	
9	3/19/2012 10:16	3488	6386	-2898	600-BKGDS1B	6765	
10	3/19/2012 10:18	4380	6386	-2006	600-BKGDS1B	6765	
11	3/19/2012 10:19	5129	6386	-1257	600-BKGDS1B	6765	
12	3/19/2012 10:20	5147	6386	-1239	600-BKGDS1B	6765	
13	3/19/2012 10:21	3374	6386	-3012	600-BKGDS1B	6765	
14	3/19/2012 10:23	5262	6386	-1124	600-BKGDS1B	6765	
15	3/19/2012 10:24	5221	6386	-1165	600-BKGDS1B	6765	
16	3/19/2012 10:27	5423	6386	-963	600-BKGDS1B	6765	
17	3/19/2012 10:28	3520	6386	-2866	600-BKGDS1B	6765	
18	3/19/2012 10:29	3776	6386	-2610	600-BKGDS1B	6765	
19	3/19/2012 10:30	4087	6386	-2299	600-BKGDS1B	6765	
20	3/19/2012 11:37	3788	6386	-2598	600-BKGDS1B	6765	
21	3/19/2012 11:38	3931	6386	-2455	600-BKGDS1B	6765	
22	3/19/2012 11:39	5080	6386	-1306	600-BKGDS1B	6765	
23	4/20/2012 13:54	6085	6386	-301	600-BKGDS1B	6765	
24	4/20/2012 13:55	6087	6386	-299	600-BKGDS1B	6765	
25	4/27/2012 10:03	6022	6386	-364	600-BKGDS1B	6765	
26	4/27/2012 10:05	5432	6386	-954	600-BKGDS1B	6765	
27	5/7/2012 10:51	7807	6386	1421	600-BKGDS1B	6765	
28	5/7/2012 11:14	7800	6386	1414	600-BKGDS1B	6765	
29	5/24/2012 15:40	4072	6066	-1994	630-BKGDS1A	7326	
30	6/4/2012 13:28	3781	6808	-3027	630-BKGDS1B	8141	
31	6/4/2012 13:29	4457	6808	-2351	630-BKGDS1B	8141	
32	6/4/2012 13:31	4667	6808	-2141	630-BKGDS1B	8141	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: NPR Survey Unit: 7 Class: 1 Area: 771.47 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
33	6/4/2012 13:32	4752	6808	-2056	630-BKGD51B	8141	
34	6/4/2012 13:33	4577	6808	-2231	630-BKGD51B	8141	
35	6/4/2012 13:34	5732	6808	-1076	630-BKGD51B	8141	
36	6/4/2012 13:35	5203	6808	-1605	630-BKGD51B	8141	
37	6/4/2012 13:37	3775	6808	-3033	630-BKGD51B	8141	
38	6/4/2012 13:38	3916	6808	-2892	630-BKGD51B	8141	
39	6/4/2012 13:46	4470	6808	-2338	630-BKGD51B	8141	
40	6/4/2012 13:48	3403	6808	-3405	630-BKGD51B	8141	
41	6/4/2012 13:49	4934	6808	-1874	630-BKGD51B	8141	
42	6/4/2012 13:50	3099	6808	-3709	630-BKGD51B	8141	
43	6/4/2012 13:51	2893	6808	-3915	630-BKGD51B	8141	
44	6/4/2012 13:53	4517	6808	-2291	630-BKGD51B	8141	
45	6/4/2012 13:56	3350	6808	-3458	630-BKGD51B	8141	
46	6/4/2012 13:57	3067	6808	-3741	630-BKGD51B	8141	
47	6/4/2012 13:58	3471	6808	-3337	630-BKGD51B	8141	
48	6/4/2012 14:00	5006	6808	-1802	630-BKGD51B	8141	
49	6/4/2012 14:01	2877	6808	-3931	630-BKGD51B	8141	

Net Gamma cpm Min: -3931

Summary Avg: -1930

Max: 1421

St Dev: 1202

Readings > 3σ investigation level are highlighted in blue

* Background ID correlates to instrument reference area background identification number

Gamma measurements > 3σ investigation level are verified by 2360 beta measurements



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: NPR Survey Unit: 7 Class: 1 Area: 771.47 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

2350 Identification #: 600

Instrument/Probe Type: 2350-1 / 44-10

Instrument Serial #: 95360

Probe Serial #: 192597

Calibration Due Date: 6/8/2012

Reference Area Background Identification #: 600-BKGDS1B Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	09/08/2011 13:56	6403
2	09/08/2011 13:57	6371
3	09/08/2011 13:58	6445
4	09/08/2011 13:59	6476
5	09/08/2011 13:01	6384
6	09/08/2011 13:04	6441
7	09/08/2011 13:09	6015
8	09/08/2011 13:11	6189
9	09/08/2011 13:13	6336
10	09/08/2011 13:14	6452
11	09/08/2011 13:15	6517
12	09/08/2011 13:16	6495
13	09/08/2011 13:17	6459
14	09/08/2011 13:18	6549
15	09/08/2011 13:19	6418
16	09/08/2011 13:20	6428
17	09/08/2011 13:22	6278
18	09/08/2011 13:32	6226
19	09/08/2011 13:33	6377
20	09/08/2011 13:34	6456

Gamma Mean Background (cpm): 6386

Standard Deviation: 127

Gamma 3σ Investigation
Level (cpm): 6765



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: NPR Survey Unit: 7 Class: 1 Area: 771.47 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

2350 Identification #: 630

Instrument/Probe Type: 2350-1 / 44-10

Instrument Serial #: 120588

Probe Serial #: 081878

Calibration Due Date: 10/16/2012

Reference Area Background Identification #: 630-BKGDS1A Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	05/07/2012 13:53	5960
2	05/07/2012 13:54	6454
3	05/07/2012 13:55	6379
4	05/07/2012 13:56	6341
5	05/07/2012 13:58	6462
6	05/07/2012 13:59	5562
7	05/07/2012 14:00	6147
8	05/07/2012 14:01	6082
9	05/07/2012 14:02	6563
10	05/07/2012 14:04	6738
11	05/07/2012 14:06	5328
12	05/07/2012 14:07	5349
13	05/07/2012 14:09	5317
14	05/07/2012 14:10	6023
15	05/07/2012 14:11	6016
16	05/07/2012 14:12	6229
17	05/07/2012 14:13	6439
18	05/07/2012 14:15	6218
19	05/07/2012 14:18	5862
20	05/07/2012 14:19	5857

Gamma Mean Background (cpm): 6066

Standard Deviation: 420

Gamma 3σ Investigation
Level (cpm): 7326



TETRATECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: NPR Survey Unit: 7 Class: 1 Area: 771.47 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

2350 Identification #: 630

Instrument/Probe Type: 2350-1 / 44-10

Instrument Serial #: 120588

Probe Serial #: 081878

Calibration Due Date: 10/16/2012

Reference Area Background Identification #: 630-8KGDS18 Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	05/23/2012 13:42	6777
2	05/23/2012 13:43	6444
3	05/23/2012 13:44	7288
4	05/23/2012 13:45	7319
5	05/23/2012 13:47	6473
6	05/23/2012 13:48	6801
7	05/23/2012 13:49	7364
8	05/23/2012 13:50	7091
9	05/23/2012 13:51	6567
10	05/23/2012 13:53	5952
11	05/23/2012 13:55	6739
12	05/23/2012 13:56	6778
13	05/23/2012 13:58	6925
14	05/23/2012 13:59	6047
15	05/23/2012 14:00	6022
16	05/23/2012 14:02	7217
17	05/23/2012 14:03	6857
18	05/23/2012 14:05	7209
19	05/23/2012 14:07	7323
20	05/23/2012 14:08	6960

Gamma Mean Background (cpm): 6808

Standard Deviation: 444

Gamma 3σ Investigation
Level (cpm): 8141



Site Area: NPR Survey Unit: 7 Class: 1 Area: 771.47 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Instrument Model:	Model 19	Reference Area Background Identification #:	636-BKGDS1
Instrument Serial Number:	115870	Reference Area Background Location:	Parcel D-1 Reference
Instrument Calibration Due Date:	10/10/2012	Exposure Rate Background (µR/hr):	5

Rdg #	Date	Exposure Rate (µR/hr)	Comments
1	3/19/2012	6	
2	3/19/2012	6	
3	3/19/2012	5	
4	3/19/2012	5	
5	3/19/2012	6	
6	3/19/2012	5	
7	3/19/2012	5	
8	3/19/2012	5	
9	3/19/2012	6	
10	3/19/2012	5	
11	3/19/2012	5	
12	3/19/2012	5	
13	3/19/2012	4	
14	3/19/2012	5	
15	3/19/2012	5	
16	3/19/2012	5	
17	3/19/2012	4	
18	3/19/2012	5	
19	3/19/2012	5	
20	3/19/2012	5	
21	3/19/2012	4	
22	3/19/2012	4	
23	4/20/2012	5	
24	4/20/2012	6	
25	4/27/2012	6	
26	4/27/2012	6	
29	5/24/2012	5	



Rdg #	Date	Exposure Rate (μ R/hr)	Comments
30	6/4/2012	6	
31	6/4/2012	6	
32	6/4/2012	6	
33	6/4/2012	6	
34	6/4/2012	5	
35	6/4/2012	5	
36	6/4/2012	6	
37	6/4/2012	5	
38	6/4/2012	5	
39	6/4/2012	5	
40	6/4/2012	5	
41	6/4/2012	4	
42	6/4/2012	4	
43	6/4/2012	5	
44	6/4/2012	5	
45	6/4/2012	4	
46	6/4/2012	4	
47	6/4/2012	5	
48	6/4/2012	5	
49	6/4/2012	4	

Exposure Rate Min: 4.00
Summary (μ R/hr) Avg: 5.06
 Max: 6.00
 St Dev: 0.67



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02314

Project Name Radiological Site Survey		PO Number N/A		LABORATORY NAME ONSITE - Curdis & Tompkins, LTD.		Project Information Section		
Project Location HUNTERS POINT		Project Number 4044-0002		LABORATORY ID				
Sampler Name RAY BRERSON		Airbill Number N/A						
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592						
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0007-F001-01	3/19/2012	0950	1		S1			
02NPR-S0007-F002-01	3/19/2012	0955	1		S1			
02NPR-S0007-F003-01	3/19/2012	0958	1		S1			
02NPR-S0007-F004-01	3/19/2012	1000	1		S1			
02NPR-S0007-F005-01	3/19/2012	1005	1		S1			
02NPR-S0007-F006-01	3/19/2012	1010	1		S1			
02NPR-S0007-F007-01	3/19/2012	1015	1		S1			
02NPR-S0007-F008-01	3/19/2012	1020	1		S1			
02NPR-S0007-F009-01	3/19/2012	1025	1		S1			
02NPR-S0007-F010-01	3/19/2012	1030	1		S1			
02NPR-S0007-F011-01	3/19/2012	1035	1		S1			
02NPR-S0007-F012-01	3/19/2012	1040	1		S1			

Relinquished by: (signature) Company RSR		Date 3-19-12	Received by: (signature) Company C & T	
Relinquished by: (signature)		Time 15:45	Received by: (signature)	
Company		Date	Company	
Relinquished by: (signature)		Time	Received by: (signature)	
Company		Date	Company	
Relinquished by: (signature)		Time	Received by: (signature)	
Company		Date	Company	

LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS	
COMPOSITE DESCRIPTION		NIGHT PIER 505	
SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY TEMPERATURE)		50-7	
SAMPLER CONDITION: COOLER SEAL		BANKED 1-2	
		SYSTEMATIC 3-22	



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02315

Project Name Radiological Site Survey		PO Number N/A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section			
Project Location HUNTERS POINT		Project Number 4044-0002		LABORATORY ID					
Sampler Name KAY ROBERTSON		Airbill Number N/A							
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592							
SAMPLE_ID	DATE	TIME	CONTAINERS	LEVEL	TYPE	T A T	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0007-F013-01	3/19/2012	1045	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
02NPR-S0007-F014-01	3/19/2012	1050	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
02NPR-S0007-F015-01	3/19/2012	1055	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
02NPR-S0007-F016-01	3/19/2012	1100	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
02NPR-S0007-F017-01	3/19/2012	1105	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
02NPR-S0007-F018-01	3/19/2012	1110	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
02NPR-S0007-F019-01	3/19/2012	1115	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	DJP	
02NPR-S0007-F020-01	3/19/2012	1120	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
02NPR-S0007-F021-01	3/19/2012	1125	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
02NPR-S0007-F022-01	3/19/2012	1130	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

Relinquished by: (signature) Company ASRS	Date 3-19-12	Received by: (signature) Company C & T	LABORATORY INSTRUCTIONS/COMMENTS COMPOSITE DESCRIPTION SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY): TEMPERATURE: SAMPLE CONDITION: COOLER/SEAL:	SAMPLING COMMENTS
Relinquished by: (signature) Company	Time 15:45	Received by: (signature) Company		
Relinquished by: (signature) Company	Date	Received by: (signature) Company		
Relinquished by: (signature) Company	Time	Received by: (signature) Company		
Relinquished by: (signature) Company	Date	Received by: (signature) Company		

Chain-of-Custody Record

BFS 02384

Project Name Radiological Site Survey		PO Number N/A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section	
Project Location HUNTERS POINT		Project Number 4044-0002		LABORATORY ID			
Sampler Name JOE CUNNINGHAM		Airbill Number N/A					
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592					
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	COMMENTS	SAMPLE ID
02NPR-S0001-F023-01	4/20/2012	1040	1		S1		
02NPR-S0001-F024-01	4/20/2012	1045	1		S1		
02NPR-S0001-F025-01	4/20/2012	1050	1		S1		
02NPR-S0001-F026-01	4/20/2012	1055	1		S1		
02NPR-S0007-F023-01	4/20/2012	1110	1		S1		
02NPR-S0007-F024-01	4/20/2012	1115	1		S1		
02NPR-S0010-F023-01	4/20/2012	1125	1		S1		
02NPR-S0010-F024-01	4/20/2012	1130	1		S1		
02NPR-S0010-F025-01	4/20/2012	1135	1		S1		

Relinquished by: (signature) <i>[Signature]</i>	Date 4-10-12	Received by: (signature) <i>[Signature]</i>	LABORATORY INSTRUCTIONS/COMMENTS
Company Tetra Tech	Time 1418	Company CT	SAMPLING COMMENTS Notified FS SU-1 CHARACTERIZATION 23-26 SU-7 CHARACTERIZATION 25-29 SU-10 CHARACTERIZATION 25-25
Relinquished by: (signature)	Date	Received by: (signature)	COMPOSITE DESCRIPTION
Company	Time	Company	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY) TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:
Relinquished by: (signature)	Date	Received by: (signature)	
Company	Time	Company	



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02393

Project Name Radiological Site Survey		PO Number N/A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section	
Project Location HUNTERS POINT		Project Number 4044-0002		LABORATORY ID			
Sampler Name <i>Joe Cunningham</i>		Airbill Number N/A					
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592					
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	COMMENTS
02NPR-S0007-F025-01	4/27/2012	1040	1		S1	<input checked="" type="checkbox"/>	
02NPR-S0007-F025-01	4/27/2012	1045	1		S1	<input checked="" type="checkbox"/>	

Relinquished by: (signature)	Date	Received by: (signature)	LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS
Company	Time	Company	COMPOSITE DESCRIPTION		
Relinquished by: (signature)	Date	Received by: (signature)	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)		
Company	Time	Company	TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:		



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San Diego, CA 92101

Chain-of-Custody Record

BFS 02410

Project Name Radiological Site Survey		PO Number N/A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section	
Project Location HUNTERS POINT		Project Number 4044-0002		LABORATORY ID			
Sampler Name Justin Hubbard		Airbill Number N/A					
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592					
SAMPLE ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	COMMENTS
02NPR-S0007-F027-01	5/7/2012	1020	1		S1	<input checked="" type="checkbox"/>	
02NPR-S0007-F028-01	5/7/2012	1025	1		S1	<input checked="" type="checkbox"/>	

Relinquished by: (signature) Justin Hubbard	Date 5-7-12	Received by: (signature) [Signature]
Company TETECI	Time 11:50	Company [Signature]
Relinquished by: (signature)	Date	Received by: (signature)
Company	Time	Company
Relinquished by: (signature)	Date	Received by: (signature)
Company	Time	Company

LABORATORY INSTRUCTIONS/COMMENTS	SAMPLING COMMENTS
COMPOSITE DESCRIPTION	ANALYSIS PER IFS 30-77 POST-ANALYSIS 5-7-12
SAMPLE CONDITION/TRANSPORTATION/LABORATORY TEMPERATURE SAMPLING CONDITION: GOOD/STABLE	



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02441

Project Name Radiological Site Survey	PO Number N/A	G A M M A S P E C		S R 9 0		A L P H A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD. LABORATORY ID 	Project Information Section			
Project Location HUNTERS POINT	Project Number 4044-0002											
Sampler Name Joe Cunningham	Airbill Number N/A											
Project Chemist LISA BIENKOWSKI	Project Chemist Phone 949-756-7592											
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	1	1	1	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0007-F029-01	5/24/2012	1300	1		S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			

Relinquished by: (signature) 	Date 05-24-12	Received by: (signature)
Company RSPS	Time 14:07	Company COT
Relinquished by: (signature)	Date	Received by: (signature)
Company	Time	Company
Relinquished by: (signature)	Date	Received by: (signature)
Company	Time	Company

LABORATORY INSTRUCTIONS/COMMENTS	SAMPLING COMMENTS NO LTH PICK-UPS 50-77 POSTAL MEDICATIONS - 251
COMPOSITE DESCRIPTION	
SAMPLE CONDITION (FOR RECEIPT) (FOR LABORATORY) TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:	



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02456

Project Name Radiological Site Survey	PO Number N/A	LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section					
Project Location HUNTERS POINT	Project Number 4044-0002	LABORATORY ID							
Sampler Name Justin Hubbard	Airbill Number N/A								
Project Chemist LISA BIENKOWSKI	Project Chemist Phone 949-756-7592								
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0007-F030-01	6/4/2012	1300	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0007-F031-01	6/4/2012	1305	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0007-F032-01	6/4/2012	1310	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0007-F033-01	6/4/2012	1315	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0007-F034-01	6/4/2012	1320	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0007-F035-01	6/4/2012	1325	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0007-F036-01	6/4/2012	1330	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0007-F037-01	6/4/2012	1335	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0007-F038-01	6/4/2012	1340	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0007-F039-01	6/4/2012	1345	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0007-F040-01	6/4/2012	1350	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0007-F041-01	6/4/2012	1355	1		S1	<input checked="" type="checkbox"/>			

Relinquished by: (signature) <i>Justin Hubbard</i>	Date 6-4-12	Received by: (signature) <i>[Signature]</i>	Company C&T	LABORATORY INSTRUCTIONS/COMMENTS COMPOSITE/DESCRIPTION SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY) TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:	SAMPLING COMMENTS NPR-S0007 Systematic
Relinquished by: (signature) <i>[Signature]</i>	Time 14:00	Received by: (signature)	Company		
Company	Date	Company			
Relinquished by: (signature)	Time	Received by: (signature)	Company		
Company	Date	Company			



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

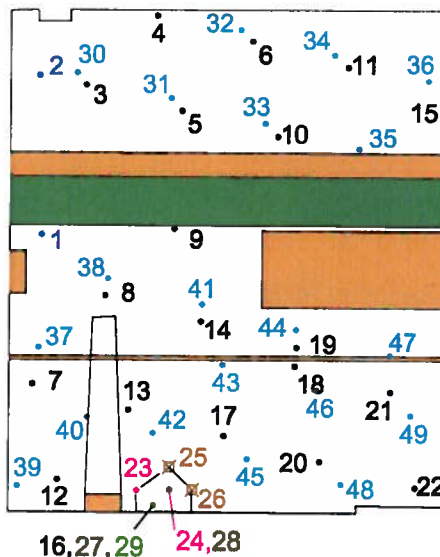
Chain-of-Custody Record

BFS 02457

Project Name Radiological Site Survey		PO Number N/A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section			
Project Location HUNTERS POINT		Project Number 4044-0002		LABORATORY ID					
Sampler Name Justin Hubbard		Airbill Number N/A							
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592							
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0007-F042-01	6/4/2012	1400	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0007-F043-01	6/4/2012	1405	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0007-F044-01	6/4/2012	1410	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0007-F045-01	6/4/2012	1415	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0007-F046-01	6/4/2012	1420	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0007-F047-01	6/4/2012	1425	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0007-F048-01	6/4/2012	1430	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0007-F049-01	6/4/2012	1435	1		S1	<input checked="" type="checkbox"/>			

Relinquished by: (signature) Justin Hubbard	Date 6-4-12	Received by: (signature) C. T.	LABORATORY INSTRUCTIONS/COMMENTS	SAMPLING COMMENTS
Company TTECI	Time 14:00	Company C. T.		NPR-S0007
Relinquished by: (signature)	Date	Received by: (signature)	COMPOSITE DESCRIPTION	Systematic
Company	Time	Company		
Relinquished by: (signature)	Date	Received by: (signature)	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)	
Company	Time	Company	TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:	

P:\CTO-02 CAD FILES (RAD EMAC)\DWG FILES\B_WORK AREA 32 TSP\CTO2_WA-32_SURVEY UNITS.DWG
PLOT/UPDATE: JUN 04 2012 10:36:42



SU-07

CLASS 1

771.47 m² (8304.08 ft²)

LEGEND:

- 1 BIAS 1-2
- 3 SYSTEMATIC 1 3-22
- 23 CHARACTERIZATION 23-24
- 25 CHARACTERIZATION 2 25-26
- 27 POST-REMEDATION 27-28
- 29 POST-REMEDATION 2 29
- 30 SYSTEMATIC 2 30-49



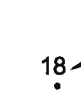
PREVIOUSLY REMEDIATED AREA



ROCK



CONCRETE



SAMPLE POINT NUMBER/LOCATION



SURVEY UNIT

RECORD COPY

SCALE 1:40

HUNTERS POINT SHIPYARD
SAN FRANCISCO, CA
P.O. BOX 884836
SAN FRANCISCO, CA 94188

NORTH PIER WA-32
SURVEY UNIT 07



TETRA TECH EC, INC.
1230 COLUMBIA STREET, SUITE 750
SAN DIEGO, CA 92101
TEL: (619) 234-8690 FAX: (619) 234-8591

Chiu, George

From: Chiu, George
Sent: Wednesday, July 11, 2012 4:22 PM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - North Pier Survey Unit 07
Attachments: 02NPR-S0007 030 to 049 Off-Site Gamma.pdf; 02NPR-S0007 Pu and Sr.pdf

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the off-site gamma spec, strontium, and plutonium results for the systematic samples from North Pier Survey Unit 07.

George Chiu | Health Physicist
Office: 415.216.2745 | Cell: 714.270.4009
george.chiu@tetrattech.com

Radiological Survey & Remedial Services
100 Washington Street Suite 200 | Reno, NV 89503
www.radsvcs.com

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Think Green - Not every email needs to be printed.

From: Chiu, George
Sent: Sunday, June 10, 2012 4:54 PM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - North Pier Survey Unit 07

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the on-site systematic sampling results from North Pier Survey Unit 07. Sample 35 was recounted for a longer duration at the direction of the laboratory manager.

According to the TSP for North Pier, 100% of the final systematic will be analyzed by gamma spectroscopy at a DoD ELAP approved laboratory. Additionally, 10% of the final systematic will be analyzed for total strontium and Pu-239.

George Chiu | Health Physicist
Office: 415.216.2745 | Cell: 714.270.4009
george.chiu@tetrattech.com

Radiological Survey & Remedial Services
100 Washington Street Suite 200 | Reno, NV 89503
www.radsvcs.com

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From: Chiu, George

Sent: Monday, June 04, 2012 10:13 AM

To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)

Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan

Subject: HPS Data - North Pier Survey Unit 07

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the post-remediation sampling results from North Pier Survey Unit 07.

We will proceed with the systematic sampling of this survey unit.

George Chiu | Health Physicist
Office: 415.216.2745 | Cell: 714.270.4009
george.chiu@tetrattech.com

Radiological Survey & Remedial Services
100 Washington Street Suite 200 | Reno, NV 89503
www.radsvcs.com

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From: Chiu, George

Sent: Tuesday, May 29, 2012 8:52 PM

To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)

Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan

Subject: HPS Data - North Pier Survey Unit 07

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review is the total strontium result for sample 24, which identified cesium-137 activity above the release criterion, from North Pier Survey Unit 07.

George Chiu | Health Physicist
Office: 415.216.2745 | Cell: 714.270.4009
george.chiu@tetrattech.com

Radiological Survey & Remedial Services
100 Washington Street Suite 200 | Reno, NV 89503
www.radsvcs.com

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From: Chiu, George

Sent: Thursday, May 10, 2012 3:55 PM

To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)

Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan

Subject: HPS Data - North Pier Survey Unit 07

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the post-remediation sampling results from North Pier Survey Unit 07.

We will proceed with additional remediation followed by post-remediation sampling.

George Chiu | Health Physicist

Office: 415.216.2745 | Cell: 714.270.4009

george.chiu@tetrattech.com

Radiological Survey & Remedial Services

100 Washington Street Suite 200 | Reno, NV 89503

www.radsvcs.com

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From: Chiu, George

Sent: Tuesday, May 01, 2012 1:50 PM

To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)

Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan

Subject: HPS Data - North Pier Survey Unit 07

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the characterization sampling results from North Pier Survey Unit 07

We will proceed with remediation followed by post-remediation sampling.

George Chiu | Health Physicist

Office: 415.216.2745 | Cell: 714.270.4009

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Think Green - Not every email needs to be printed.

From: Chiu, George

Sent: Thursday, April 26, 2012 12:42 PM

To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)

Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan

Subject: HPS Data - North Pier Survey Unit 07

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the characterization sampling results from North Pier Survey Unit 07. Samples 23 and 24 were recounted for a longer duration at the direction of the laboratory manager.

We will proceed with characterization/remediation around sample point 24 (0.1590 pCi/g) due to cesium-137 activity.

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Think Green - Not every email needs to be printed.

From: Chiu, George

Sent: Wednesday, April 25, 2012 10:05 PM

To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)

Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan

Subject: HPS Data - North Pier Survey Unit 07

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review is the total strontium result for the sample with cesium-137 activity above the release criterion from North Pier Survey Unit 07.

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Think Green - Not every email needs to be printed.

From: Chiu, George

Sent: Monday, March 26, 2012 9:53 AM

To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)

Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan

Subject: HPS Data - North Pier Survey Unit 07

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the on-site bias and systematic sampling results from North Pier Survey Unit 07. Also attached are the gamma scans, statics, and exposure rate measurements.

We will proceed with characterization/remediation around sample point 16 (0.2500 pCi/g) due to cesium-137 activity.

George Chiu | Health Physicist

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Think Green - Not every email needs to be printed.



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: March 19, 2012

RAD EMAC – CTO 002

Overview

The HPNS Team continued field activities for the North Pier and Work Areas #32, and #33. Details of the work activities performed are provided in the sections below.

North Pier

- Survey activities were performed by the HPNS Team on wooden railroad ties (Survey Nos. HPS-A-NPR-029 and HPS-A-NPR-030); a total of 72 swipe samples were collected and submitted to the on-site laboratory for analysis.
- The HPNS Team performed Class 1 survey activities as follows:
 - Survey Unit 6 – A total of 2 biased and 20 systematic gamma static measurements were logged with a maximum measurement of 6,392 cpm. In addition, 22 soil samples were collected and submitted to the on-site laboratory for analysis.
 - Survey Unit 7 – A total of 2 biased and 20 systematic gamma static measurements were logged with a maximum measurement of 5,465 cpm. In addition, 22 soil samples were collected and submitted to the on-site laboratory for analysis.
- The RSO is in the process of reviewing the survey data for Survey Units 6 and 7.
- The HPNS Team issued drawings to identify locations for characterization sample collection in Class 1 Survey Unit 1.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

- Backfill activities were completed in Trench Unit Nos. 192 and 194 by the HPNS Team.
- A variety of housekeeping activities were performed throughout Parcel C by the HPNS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report



TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: March 19, 2012

RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

- The HPNS Team performed the following RSY4 processing activities:
 - One truckload of material was received for processing.
 - Remediated approximately 2.5 cubic yards of soil from ES Unit 0618 and placed the material in LLRW bins pending off-site disposal by the DON radiological waste contractor.
- The HPNS Team continued radiological monitoring and control activities for the RSYs including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring, as appropriate.

On-Site and Off-Site Laboratories

- On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:
 - Soil samples received for gamma spectroscopy analysis: 55
 - Swipe samples received for Protean counts: 175
 - Air samples received: 6
 - Samples analyzed by gamma spectroscopy: 82
 - Gamma spectroscopy samples recounted: 3
 - Protean swipe samples counted: 8
 - Protean air samples counted: 6
- A total of 291 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.

Basewide Support

- Portal Monitor Activities
 - A total of two empty trucks entered HPNS through the portal monitor with no alarms.
 - A total of nine truckloads of material exited HPNS through the portal monitor with no alarms.
- Radiological support was provided to Shaw Group by the HPNS Team during groundwater monitoring activities in Buildings 211/253.
- Radiological support was provided during the Parcel C multi-contractor bid walkthrough.



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel E and Building 500 Series Removal Action

Report Date: March 19, 2012	RMAC – CTO 07
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Overview

The HPNS Team continued field activities for the Buildings 506 and 507 Sites, Shacks 79 and 80, the 500 Series Area, and Work Area #36. Details of the activities performed are provided in the sections below.

Building 506 Site

- Approximately 28 cubic yards of excavated soil generated during the former underground radiological waste storage tank exploratory excavation was placed in LLRW bins AWIU000126, AWIU000175, and ESUU10078 for off-site disposal.

Building 507 Site

- The HPNS Team performed soil grading and debris removal in preparation for upcoming towed array surveys.

Shacks 79 and 80

- Approximately 7 cubic yards of soil was remediated from Class 1 Survey Unit 1 by the HPNS Team and placed in LLRW bin AWIU000126 for off-site disposal.
- The HPNS Team performed Class 1 survey activities for Survey Unit 1. A total of five post-remediation gamma static measurements were logged with a maximum measurement of 6,725 cpm. In addition, five soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

500 Series Area

- The HPNS Team transferred approximately 12 cubic yards of excavated sand/soil material from Survey Unit 13 to RSY4 pending survey activities.
- The HPNS Team provided the RASO with off-site analytical results for the systematic samples collected from Class 1 Survey Unit 7; no activity above the release criteria was identified.
- The HPNS Team issued drawings to identify locations for characterization sample collection in Class 1 Survey Unit 16 and for systematic sample collection in Class 1 Survey Units 20 and 21.

- Surveyed and released concrete debris generated during sand/soil removal in Survey Unit 13 (Survey Nos. HPS-A-500SA-040 and HPS-A-500SA-041) was transferred to the recycling bins and stockpiles near Building 411.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: April 20, 2012

RAD EMAC – CTO 002

Overview

The HPNS Team continued field activities for the North Pier and Work Areas #32 and #34. Details of the work activities performed are provided in the sections below.

North Pier

- The HPNS Team performed Class 1 survey activities as follows:
 - Survey Unit 1 – A total of four characterization gamma static measurements were logged with a maximum measurement of 7,840 cpm. In addition, four soil samples were collected and submitted to the on-site laboratory for analysis.
 - Survey Unit 7 – A total of two characterization gamma static measurements were logged with a maximum measurement of 6,087 cpm. In addition, two soil samples were collected and submitted to the on-site laboratory for analysis.
 - Survey Unit 8 – A total of seven characterization gamma static measurements were logged with a maximum measurement of 6,911 cpm. In addition, seven soil samples were collected and submitted to the on-site laboratory for analysis.
 - Survey Unit 10 – A total of three characterization gamma static measurements were logged with a maximum measurement of 6,691 cpm. In addition, three soil samples were collected and submitted to the on-site laboratory for analysis.
- The RSO is in the process of reviewing the survey data for Survey Units 1, 7, 8, and 10.
- The HPNS Team issued drawings to identify locations for characterization sample collection in Class 1 Survey Unit 8.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

- The HPNS Team excavated approximately 156 cubic yards of soil from Work Area #32 and transferred the material to RSY4 for processing. Excavation activities were performed for the following trench segments:
 - 02-C32-00-1D 45 linear feet completed
 - 02-C32-00-1E 6 linear feet completed
 - 02-C32-00-1F 44 linear feet completed
 - 02-C32-00-1J 12 linear feet completed

- 02-C32-00-1K 15 linear feet completed
 - 02-C32-00-8D 62 linear feet completed
 - 02-C32-00-8H 50 linear feet completed
- A total of 122 linear feet of trench (including excavated soil, manholes, and pipes) identified on the design drawings and 112 linear feet not identified on the design drawings were completed by the HPNS Team.
- Manholes MH946, MH1334, MH1335 and MH1336 along and pipes excavated from trench segments 02-C32-00-1D, -1E, -1F, -1J, -1K, -8D, and -8H were placed on plastic pending further activities.
- The HPNS Team investigated the entire trench segment 02-C32-00-1F for the presence of pipe. Although depicted on the design drawing, no pipe was found during this investigation.
- A total of two sediment samples were collected from excavated Manholes MH946 (02-PCMH946-064-01) and MH1336 (02-PCMH1336-063-01) by the HPNS Team and submitted to the on-site laboratory for analysis.
- The RSOR provided the HPNS Team with survey results for the excavated manholes and pipe sections detailed in Survey Nos. HPS-PCPIPE-041312-051, HPS-PCPIPE-041312-052, and HPS-PCPIPE-041612-053. Because no activity above the release criteria was identified, these 17 manholes and 11 pipe sections were released for transfer to the recycling stockpiles near Building 411.
- Metal rail track encountered during Work Area #32 trench excavations was sized and staged for transfer to the recycling bins near Building 411.
- A variety of housekeeping activities were performed throughout Parcel C by the HPNS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report



TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: April 20, 2012

RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

- The HPNS Team performed towed array survey activities for ES Units 0686 and 0687 at RSY3.
- The HPNS Team performed the following RSY4 processing activities:
 - A total of 13 truckloads of material were received for processing.
 - Towed array survey activities were performed for ES Units 0645, 0678, 0681, 0683, 0692, and 0693.
 - ES Units 0659 and 0674 were staged in the stockpile area pending receipt of the off-site analytical results.
 - Began transfer of ES Unit 0675 to the stockpile area.
- The HPNS Team continued radiological monitoring and control activities for the RSYs including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring, as appropriate.

On-Site and Off-Site Laboratories

- On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:
 - Soil samples received for gamma spectroscopy analysis: 36
 - Swipe samples received for Protean counts: 128
 - Air samples received: 10
 - Samples analyzed by gamma spectroscopy: 25
 - Gamma spectroscopy samples recounted: 5
 - Protean swipe samples counted: 40
 - Protean air samples counted: 10
- A total of 188 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: April 20, 2012

RMAC – CTO 07

Overview

The HPNS Team continued field activities for Shacks 79 and 80, the 500 Series Area, and Work Area #36. Details of the activities performed are provided in the sections below.

Shacks 79 and 80

- The HPNS Team performed Class 1 survey activities for Survey Unit 1. A total of two systematic gamma static measurements were logged with a maximum measurement of 5,807 cpm. In addition, two soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

500 Series Area

- The HPNS Team exposed asphalt and continued soil grading and debris removal in preparation for towed array surveys in Class 2 Survey Unit 23.
- Asphalt covering Survey Unit 23 (near Building 505) was removed, scanned, and staged within the Class 2 survey boundaries; no elevated readings were identified during the scanning activities.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: April 27, 2012

RAD EMAC – CTO 002

Overview

The HPNS Team continued field activities for the North Pier and Work Area #32. Details of the work activities performed are provided in the sections below.

North Pier

- Approximately 96 cubic yards of asphalt removed from Survey Unit 9 was transferred by the HPNS Team to the Building 411 recycling stockpiles
- A total of 12 cubic yards of soil were remediated from Class 1 Survey Units 1, 8, and 10 by the HPNS Team and placed in LLRW bin ESUU100006 for off-site disposal.
- The HPNS Team performed Class 1 survey activities for Survey Unit 7. A total of two characterization gamma static measurements were logged with a maximum measurement of 6,021 cpm. In addition, two soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPNS Team provided the RASO with off-site analytical results for the systematic samples collected from Class 1 Survey Unit 11. Characterization and remediation will be performed due to the presence of ^{137}Cs activity above the release limit at Sample Point 24 (0.118 pCi/g).

Parcel C Storm Drain and Sanitary Sewer Removal Activities

- Manhole MH946 was placed in LLRW bin ESSU100006 for off-site disposal by the HPNS Team.
- A variety of housekeeping activities were performed throughout Parcel C by the HPNS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report



TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: April 27, 2012

RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

- The HPNS Team performed the following RSY4 processing activities:
 - Towed array survey activities were performed for ES Unit 0695.
 - Two biased and 18 systematic soil samples were collected from ES Unit 0691 and submitted to the on-site laboratory for analysis.
 - ES Units 0658, 0676, and 0680 were staged in the stockpile area pending receipt of the off-site analytical results.
- The HPNS Team continued radiological monitoring and control activities for the RSYs including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring, as appropriate.

On-Site and Off-Site Laboratories

- On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:
 - Soil samples received for gamma spectroscopy analysis: 71
 - Swipe samples received for Protean counts: 6
 - Air samples received: 7
 - Samples analyzed by gamma spectroscopy: 62
 - Gamma spectroscopy samples recounted: 12
 - Protean swipe samples counted: 6
 - Protean air samples counted: 8
- A total of 387 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: April 27, 2012

RMAC – CTO 07

Overview

The HPNS Team continued field activities for the Building 520 Site, the Building 707 Triangle, the 500 Series Area, and Work Areas #21 and #36. Details of the activities performed are provided in the sections below.

Building 520 Site

- Approximately 3 cubic yards of soil was remediated from Class 1 Survey Unit 5 by the HPNS Team and placed in LLRW bin AWIU000263 for off-site disposal.
- The HPNS Team performed Class 1 survey activities for Survey Unit 5. A total of two replacement systematic gamma static measurements were logged with a maximum measurement of 5,596 cpm. In addition, two soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

Building 707 Triangle

- Towed array gamma scan surveys were performed over J Street in Work Area #21.
- Backfill activities were completed for Class 1 Survey Unit 19 by the HPNS Team.
- The HPNS Team issued drawings to identify remediation locations in Class 1 Survey Units 16, 20, 21, and 22.

500 Series Area

- The HPNS Team resumed soil grading and debris removal in preparation for upcoming towed array surveys in Class 2 Survey Unit 23.
- Towed array gamma scan surveys were performed over Class 2 Survey Unit 22.
- The HPNS Team performed Class 1 survey activities for Survey Unit 19. A total of five characterization gamma static measurements were logged with a maximum measurement of 5,643 cpm. In addition, five soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPNS Team issued drawings to identify locations for characterization sample collection in Class 1 Survey Unit 19.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: May 7, 2012	RAD EMAC – CTO 002
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Overview

The HPNS Team continued field activities for the North Pier and Work Areas #32 and #34. Details of the work activities performed are provided in the sections below.

North Pier

- The HPNS Team performed Class 1 survey activities for Survey Unit 7. A total of two post-remediation gamma static measurements were logged with a maximum measurement of 7,807 cpm. In addition, two soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPNS Team issued a record drawing to identify the post-remediation sample collection location in Class 1 Survey Unit 7.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

- Backfill activities were initiated for Trench Unit No. 243 by the HPNS Team.
- The HPNS Team provided the RASO with the Internal Draft SUPR for Trench Unit No. 244 along with a request for concurrence to backfill.
- The HPNS Team issued an updated Parcel C Trench Survey Unit Key Plan.
- Perimeter fencing was reconfigured in Work Area #34 to facilitate trench backfill activities.
- A variety of housekeeping activities were performed throughout Parcel C by the HPNS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report



TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: May 7, 2012

RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

- The HPNS Team received a total of 14 truckloads of material at RSY3 for processing.
- The HPNS Team performed the following RSY4 processing activities:
 - A total of eight truckloads of material were received for processing.
 - Issued drawings to identify remediation locations in ES Unit 0640 and biased and systematic sample collection locations for ES Unit 0682.
 - Soil samples were collected by the HPNS Team and submitted to the on-site laboratory for analysis as follows:
 - 2 biased soil samples from ES Unit 0626
 - 3 biased soil samples from ES Unit 0645
 - 2 biased and 18 systematic soil samples from ES Unit 0682
- The HPNS Team continued radiological monitoring and control activities for the RSYs including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring, as appropriate.
- The HPNS Team provided the RASO with off-site laboratory analytical results for ES Unit 0653 and a request for concurrence to use the materials as trench backfill.

Basewide Support

- Five outgoing materials and equipment surveys were performed by the HPNS Team.

On-Site and Off-Site Laboratories

- On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:
 - Soil samples received for gamma spectroscopy analysis: 27
 - Swipe samples received for Protean counts: 88
 - Air samples received: 13
 - Samples analyzed by gamma spectroscopy: 77
 - Gamma spectroscopy samples recounted: 6
 - Protean swipe samples counted: 97
 - Protean air samples counted: 12
- A total of 195 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel E and Building 500 Series Removal Action

Report Date: May 7, 2012

RMAC – CTO 07

Overview

The HPNS Team continued field activities for the Building 707 Triangle, the 500 Series Area, and Work Areas #21 and #36. Details of the activities performed are provided below.

Building 707 Triangle

- Asphalt covering J Street and Class 1 Survey Units 22 and 23 was removed, scanned, and staged within the Building 707 Triangle boundaries; no elevated readings were identified during the scanning activities.
- Approximately 18 cubic yards of soil was remediated from Class 1 Survey Unit 21 by the HPNS Team and placed in LLRW bin BFLU000349T17 for off-site disposal.

500 Series Area

- The HPNS Team resumed exposing asphalt and soil grading activities in preparation for towed array surveys in Class 2 Survey Unit 23.
- The HPNS Team issued drawings to identify locations for biased and systematic sample collection in Class 1 Survey Unit 13.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- The HPNS Team excavated approximately 264 cubic yards of soil from Work Area #36 and transferred the material to both RSY3 and RSY4 for processing. Excavation activities were performed for the following trench segments:
 - 07-E36-00-9G 29 linear feet completed
 - 07-E36-38-4E 93 linear feet completed
 - 07-E36-38-4F 103 linear feet completed
 - 07-E36-38-4G 39 linear feet completed
 - 07-E36-38-4H 79 linear feet completed
- A total of 343 linear feet of trench (including excavated soil, manholes, and pipes) identified on the design drawings were completed by the HPNS Team.
- Manholes MH1243 and MH1341 along with pipe excavated from trench segments 07-E36-00-9G; 07-E36-38-4E, -4F, -4G, and -4H were placed on plastic pending further activities.

- The HPNS Team issued an updated Parcel E Trench Survey Unit Key Plan.
- A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: May 24, 2012

RAD EMAC – CTO 002

Overview

The HPNS Team continued field activities for the North Pier and Work Areas #32, #33, #34, and #35. Details of the work activities performed are provided in the sections below.

North Pier

- The HPNS Team performed Class 1 survey activities for Survey Unit 7. A post-remediation gamma static measurement was logged at 4,071 cpm. In addition, one soil sample was collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

- Radiologically surveyed and released excavated manholes and pipe sections (Survey Nos. HPS-PCPIPE-121311-041, HPS-PCPIPE-043012-054 and HPS-PCPIPE-043012-055) were transferred to stockpiles near Building 411 pending off-site disposal or recycling.
- The HPNS Team provided the RASO with the Internal Draft SUPR for Trench Unit No. 238 (associated with Buildings 211, 231, and 253) along with a request for backfill concurrence.
- The HPNS Team issued Figures 1-1/3-1 for inclusion in the Internal Draft SUPR for Trench Unit No. 242.
- Site restoration activities including curbing installation were continued by the HPNS Team over backfilled trench units in Work Area #33.
- A variety of housekeeping activities were performed throughout Parcel C by the HPNS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report



TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: May 24, 2012

RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

- The HPNS Team performed the following RSY4 processing activities:
 - Towed array survey activities were performed for ES Units 0696, 0699, and 0707.
 - ES Unit 0694 was staged in the stockpile area pending receipt of the off-site analytical results.
- The HPNS Team continued radiological monitoring and control activities for the RSYs including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring, as appropriate.

On-Site and Off-Site Laboratories

- On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:
 - Soil samples received for gamma spectroscopy analysis: 95
 - Swipe samples received for Protean counts: 34
 - Air samples received: 5
 - Samples analyzed by gamma spectroscopy: 149
 - Gamma spectroscopy samples recounted: 11
 - Protean swipe samples counted: 34
 - Protean air samples counted: 5
- A total of 253 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.

Basewide Support

- Radiological support was provided to CKY by the HPNS Team during maintenance activities at Parcel E-2.
- One outgoing materials and equipment survey was performed by the HPNS Team.



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: May 24, 2012	RMAC – CTO 07
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Overview

The HPNS Team continued field activities for the 500 Series Area and Work Area #36. Details of the activities performed are provided in the sections below.

500 Series Area

- Approximately 5 cubic yards of soil was remediated from Class 1 Survey Unit 15 by the HPNS Team and placed in LLRW bin GFLU001181T4 for off-site disposal.
- The HPNS Team performed Class 1 survey activities for Survey Unit 15. A total of three post-remediation gamma static measurements were logged with a maximum measurement of 6,668 cpm. In addition, three soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- Building 500 Series Area metal wire rope and debris (Survey No. HPS-A-500SA-035) continued to be placed in LLRW bins BKRU025441T7, GFLU001070, GFLU001119, and GFLU002111 for off-site disposal.
- Approximately 2 cubic yards of soil was remediated from Trench Unit No. 300 (trench segment 07-E36-00-7I) by the HPNS Team and placed in LLRW bin GFLU001042 for off-site disposal.
- A total of three post-remediation samples were collected from Trench Unit No. 300 by the HPNS Team and submitted to the on-site laboratory for analysis.
- The HPNS Team issued Figures 1-1/3-1 for inclusion in the Internal Draft SUPR for Trench Unit No. 248 (associated with the Building 506 Site).
- A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: June 4, 2012

RAD EMAC – CTO 002

Overview

The HPNS Team continued field activities for the North Pier and Work Areas #32, #34, and #35. Details of the work activities performed are provided in the sections below.

North Pier

- The HPNS Team performed Class 1 survey activities for Survey Unit 7. A total of 20 systematic gamma static measurements were logged with a maximum measurement of 5,732 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPNS Team provided the RASO with on-site analytical results for the post-remediation sample collected from Class 1 Survey Unit 7. Because no activity above the release criteria was identified, systematic sample collection activities will be performed.
- The HPNS Team issued drawings to identify systematic sample collection locations in Class 1 Survey Unit 7 and record drawings to identify post-remediation sample collection locations in Class 1 Survey Unit 7.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

- Backfill activities were initiated for Trench Unit No. 242 by the HPNS Team.
- A variety of housekeeping activities were performed throughout Parcel C by the HPNS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report



TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: June 4, 2012	RMAC – CTO 004
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Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

- The HPNS Team performed the following RSY4 processing activities:
 - A total of 19 truckloads of material were received for processing.
 - ES Unit 0698 was staged in the stockpile area pending receipt of the off-site analytical results.
- The HPNS Team continued radiological monitoring and control activities for the RSYs.
- On-site analytical data for ES Units 0697 and 0707 were submitted to the RASO for review with a request for concurrence to stage the materials pending receipt of the off-site analytical results prior to transferring to the DON non-LLRW contractor for off-site disposal at a CERCLA landfill.

On-Site and Off-Site Laboratories

- On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:
 - Soil samples received for gamma spectroscopy analysis: 27
 - Swipe samples received for Protean counts: 98
 - Air samples received: 3
 - Samples analyzed by gamma spectroscopy: 74
 - Gamma spectroscopy samples recounted: 8
 - Protean swipe samples counted: 137
 - Protean air samples counted: 4
- A total of 123 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.

Basewide Support

- Portal Monitor Activities
 - A total of 46 empty trucks entered HPNS through the portal monitor with no alarms.
 - A total of 46 truckloads of material exited HPNS through the portal monitor with no alarms.



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: June 4, 2012

RMAC – CTO 07

Overview

The HPNS Team continued field activities for the Building 707 Triangle, Shacks 79 and 80, the 500 Series Area, and Work Areas #21 and #36. Details of the activities performed are provided in the sections below.

Building 707 Triangle

- The HPNS Team provided the RASO with on-site analytical results for the investigative soil samples collected from the 25 pothole excavations around the previously remediated strontium spill area associated with Class 1 Survey Units 16, 21, 22, and 23. Characterization and remediation will be performed due to the presence of ¹³⁷Cs contamination as follows:
 - Pothole 16 Wall Sample (03AB707-200) with ¹³⁷Cs at 0.2159 pCi/g
 - Pothole 24 Wall Sample (03AB707-216) with ¹³⁷Cs at 0.2096 pCi/g

Shacks 79 and 80

- The HPNS Team provided the RASO with on-site analytical results for the post-remediation samples collected from Class 1 Survey Unit 3. Because no activity above the release criteria was identified, systematic sample collection activities will be performed.
- The HPNS Team issued record drawings to identify post-remediation sample collection locations in Class 1 Survey Unit 3.

500 Series Area

- The HPNS Team continued soil grading and debris removal in preparation for upcoming survey activities in Class 2 Survey Units 22 and 23.
- The HPNS Team provided the RASO with on-site analytical results for the post-remediation samples collected from Class 1 Survey Unit 15. Because no activity above the release criteria was identified, systematic sample collection activities will be performed.

- Approximately 576 cubic yards of staged asphalt removed from radiologically cleared Class 1 Survey Units 10 and 11 was transferred by the HPNS Team from the Salvage Yard to the Building 411 recycling stockpiles.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- The HPNS Team excavated approximately 228 cubic yards of soil from Work Area #36 and transferred the material to RSY4 for processing. Excavation activities were performed for the following trench segments:
 - 07-E36-38-1I 48 linear feet completed
 - 07-E36-38-1J 15 linear feet completed
 - 07-E36-38-1K 31 linear feet completed
 - 07-E36-38-1M 3 linear feet completed
 - 07-E36-38-1N 3 linear feet completed
 - 07-E36-38-8E 10 linear feet completed
 - 07-E36-38-8F 10 linear feet completed
- A total of 100 linear feet of trench (including excavated soil, manholes, and pipes) identified on the design drawings and 20 linear feet not identified on the design drawings were completed by the HPNS Team.
- Excavated Manholes MH1254, MH1255, MH1258, MH1259, and MH1260 were placed on plastic pending further activities.
- A total of five sediment samples were collected from excavated Manholes MH1255, MH1258, MH1259, MH1260, and MH1262 (MH0020 through MH0024) by the HPNS Team and submitted to the on-site laboratory for analysis.
- The HPNS Team provided the RASO with on-site analytical results for the post-remediation samples collected from Trench Unit No. 300. Because no activity above the release criteria was identified, systematic sample collection activities will be performed.
- Work area perimeter fencing was reconfigured by the HPNS Team along H Street.
- A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

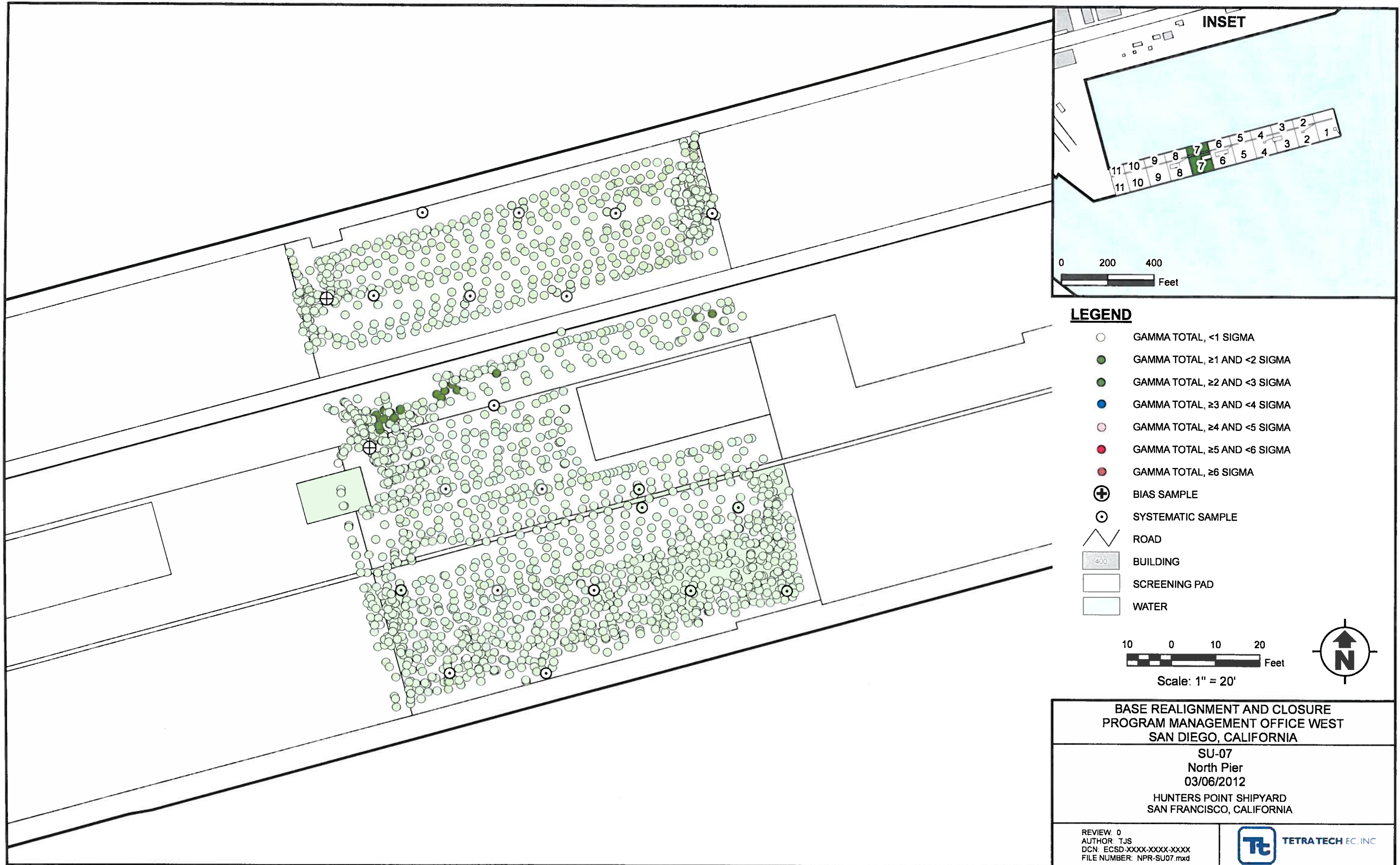
Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report

Highlighted Activities: Ra-226 ≥ 1.633 (On-site) & 1.375 (Off-site) ; Cs-137 ≥ 0.113 ; Bi-214 ≥ 1.485 ; Pb-214 ≥ 1.485 (pCi/g)

On-Site Laboratory (pCi/g)

Off-Site Laboratory (pCi/g)



P:\CTO-02 CAD FILES (RAD EMAC)\DWG FILES\B_WORK AREA 32 TSP\CTO2_WA-32_SURVEY UNITS.DWG
PLOT/UPDATE: MAY 30 2012 15:24:48



LEGEND:

- 1 BIASED 1-2
- 3 SYSTEMATIC 1 3-22
- 23 CHARACTERIZATION 23-29
- 25 POST-REMEDATION 30-31
- 32 SYSTEMATIC 2 32-51



AREAS PREVIOUSLY REMEDIATED



ROCK

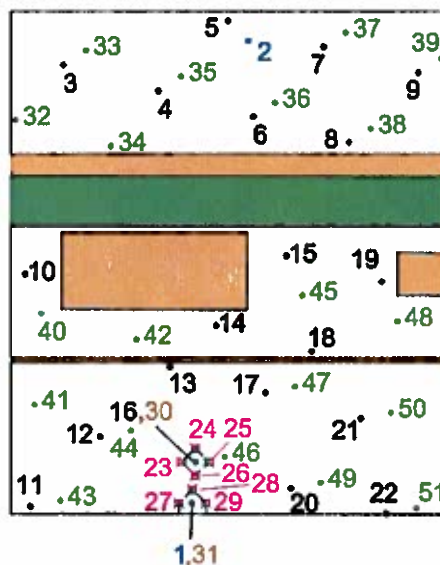


CONCRETE



SAMPLE POINT NUMBER/LOCATION

SURVEY UNIT



SU-08

CLASS 1

767.33 m² (8259.56 ft²)

RECORD COPY

SCALE 1:40

HUNTERS POINT SHIPYARD
SAN FRANCISCO, CA
P.O. BOX 884836
SAN FRANCISCO, CA 94188

NORTH PIER WA-32
SURVEY UNIT 08



TETRA TECH EC, INC
1230 COLUMBIA STREET, SUITE 750
SAN DIEGO, CA 92101
TEL: (619) 234-8690 FAX: (619) 234-8591



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: NPR Survey Unit: 8 Class: 1 Area: 767.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

2350 Identification #: 600

Instrument/Probe Type: 2350-1 / 44-10

Instrument Serial #: 95360

Probe Serial #: 192597

Calibration Due Date: 6/8/2012

Reference Area Background Identification #: 600-BKGDS1B Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	09/08/2011 13:56	6403
2	09/08/2011 13:57	6371
3	09/08/2011 13:58	6445
4	09/08/2011 13:59	6476
5	09/08/2011 13:01	6384
6	09/08/2011 13:04	6441
7	09/08/2011 13:09	6015
8	09/08/2011 13:11	6189
9	09/08/2011 13:13	6336
10	09/08/2011 13:14	6452
11	09/08/2011 13:15	6517
12	09/08/2011 13:16	6495
13	09/08/2011 13:17	6459
14	09/08/2011 13:18	6549
15	09/08/2011 13:19	6418
16	09/08/2011 13:20	6428
17	09/08/2011 13:22	6278
18	09/08/2011 13:32	6226
19	09/08/2011 13:33	6377
20	09/08/2011 13:34	6456

Gamma Mean Background (cpm): 6386

Standard Deviation: 127

Gamma 3 σ Investigation
Level (cpm): 6765



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: NPR Survey Unit: 8 Class: 1 Area: 767.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

2350 Identification #: 630

Instrument/Probe Type: 2350-1 / 44-10

Instrument Serial #: 120588

Probe Serial #: 081878

Calibration Due Date: 10/16/2012

Reference Area Background Identification #: 630-BKGD51B Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	05/23/2012 13:42	6777
2	05/23/2012 13:43	6444
3	05/23/2012 13:44	7288
4	05/23/2012 13:45	7319
5	05/23/2012 13:47	6473
6	05/23/2012 13:48	6801
7	05/23/2012 13:49	7364
8	05/23/2012 13:50	7091
9	05/23/2012 13:51	6567
10	05/23/2012 13:53	5952
11	05/23/2012 13:55	6739
12	05/23/2012 13:56	6778
13	05/23/2012 13:58	6925
14	05/23/2012 13:59	6047
15	05/23/2012 14:00	6022
16	05/23/2012 14:02	7217
17	05/23/2012 14:03	6857
18	05/23/2012 14:05	7209
19	05/23/2012 14:07	7323
20	05/23/2012 14:08	6960

Gamma Mean Background (cpm): 6808

Standard Deviation: 444

Gamma 3σ Investigation Level (cpm): 8141



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: NPR Survey Unit: 8 Class: 1 Area: 767.33 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1	3/20/2012 12:55	5974	6386	-412	600-BKGDS1B	6765	
2	3/20/2012 12:56	5322	6386	-1064	600-BKGDS1B	6765	
3	3/20/2012 12:58	5573	6386	-813	600-BKGDS1B	6765	
4	3/20/2012 12:59	5813	6386	-573	600-BKGDS1B	6765	
5	3/20/2012 13:01	6470	6386	84	600-BKGDS1B	6765	
6	3/20/2012 13:02	5169	6386	-1217	600-BKGDS1B	6765	
7	3/20/2012 13:04	5242	6386	-1144	600-BKGDS1B	6765	
8	3/20/2012 13:05	4722	6386	-1664	600-BKGDS1B	6765	
9	3/20/2012 13:07	5328	6386	-1058	600-BKGDS1B	6765	
10	3/20/2012 13:08	4335	6386	-2051	600-BKGDS1B	6765	
11	3/20/2012 13:24	5183	6386	-1203	600-BKGDS1B	6765	
12	3/20/2012 13:25	3383	6386	-3003	600-BKGDS1B	6765	
13	3/20/2012 13:27	3501	6386	-2885	600-BKGDS1B	6765	
14	3/20/2012 13:29	5260	6386	-1126	600-BKGDS1B	6765	
15	3/20/2012 13:30	4000	6386	-2386	600-BKGDS1B	6765	
16	3/20/2012 13:31	6651	6386	265	600-BKGDS1B	6765	
17	3/20/2012 13:32	3284	6386	-3102	600-BKGDS1B	6765	
18	3/20/2012 13:33	4296	6386	-2090	600-BKGDS1B	6765	
19	3/20/2012 13:35	4830	6386	-1556	600-BKGDS1B	6765	
20	3/20/2012 13:36	5290	6386	-1096	600-BKGDS1B	6765	
21	3/20/2012 13:37	3142	6386	-3244	600-BKGDS1B	6765	
22	3/20/2012 13:39	5423	6386	-963	600-BKGDS1B	6765	
23	4/20/2012 13:44	6803	6386	417	600-BKGDS1B	6765	
24	4/20/2012 13:46	5673	6386	-713	600-BKGDS1B	6765	
25	4/20/2012 13:47	5578	6386	-808	600-BKGDS1B	6765	
26	4/20/2012 13:49	6272	6386	-114	600-BKGDS1B	6765	
27	4/20/2012 13:50	6402	6386	16	600-BKGDS1B	6765	
28	4/20/2012 13:51	6912	6386	526	600-BKGDS1B	6765	
29	4/20/2012 13:52	5753	6386	-633	600-BKGDS1B	6765	
30	5/1/2012 15:31	7184	6386	798	600-BKGDS1B	6765	
31	5/1/2012 15:10	6916	6386	530	600-BKGDS1B	6765	
32	5/31/2012 15:18	4588	6808	-2220	630-BKGDS1B	8141	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: NPR Survey Unit: 8 Class: 1 Area: 767.33 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
33	5/31/2012 15:19	4765	6808	-2043	630-BKGDS1B	8141	
34	5/31/2012 15:20	6104	6808	-704	630-BKGDS1B	8141	
35	5/31/2012 15:21	4869	6808	-1939	630-BKGDS1B	8141	
36	5/31/2012 15:22	5190	6808	-1618	630-BKGDS1B	8141	
37	5/31/2012 15:23	4647	6808	-2161	630-BKGDS1B	8141	
38	5/31/2012 15:24	4252	6808	-2556	630-BKGDS1B	8141	
39	5/31/2012 15:25	4421	6808	-2387	630-BKGDS1B	8141	
40	5/31/2012 15:27	4532	6808	-2276	630-BKGDS1B	8141	
41	5/31/2012 15:28	3574	6808	-3234	630-BKGDS1B	8141	
42	5/31/2012 15:29	4264	6808	-2544	630-BKGDS1B	8141	
43	5/31/2012 15:30	5725	6808	-1083	630-BKGDS1B	8141	
44	5/31/2012 15:31	2879	6808	-3929	630-BKGDS1B	8141	
45	5/31/2012 15:32	5050	6808	-1758	630-BKGDS1B	8141	
46	5/31/2012 15:34	5312	6808	-1496	630-BKGDS1B	8141	
47	5/31/2012 15:35	3551	6808	-3257	630-BKGDS1B	8141	
48	5/31/2012 15:36	5107	6808	-1701	630-BKGDS1B	8141	
49	5/31/2012 15:37	4249	6808	-2559	630-BKGDS1B	8141	
50	5/31/2012 15:38	3015	6808	-3793	630-BKGDS1B	8141	
51	5/31/2012 15:39	6079	6808	-729	630-BKGDS1B	8141	

Net Gamma cpm Min: -3929

Summary Avg: -1495

Max: 798

St Dev: 1173

Readings > 3σ investigation level are highlighted in blue

* Background ID correlates to instrument reference area background identification number

Gamma measurements > 3σ Investigation level are verified by 2360 beta measurements



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Exposure Rate Measurements

Page 1

Site Area: NPR Survey Unit: 8 Class: 1 Area: 767.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Instrument Model:	Model 19	Reference Area Background Identification #:	636-BKGDS1
Instrument Serial Number:	115870	Reference Area Background Location:	Parcel D-1 Reference
Instrument Calibration Due Date:	10/10/2012	Exposure Rate Background (µR/hr):	5

Rdg #	Date	Exposure Rate (µR/hr)	Comments
1	3/20/2012	6	
2	3/20/2012	5	
3	3/20/2012	5	
4	3/20/2012	5	
5	3/20/2012	6	
6	3/20/2012	5	
7	3/20/2012	5	
8	3/20/2012	5	
9	3/20/2012	5	
10	3/20/2012	5	
11	3/20/2012	5	
12	3/20/2012	4	
13	3/20/2012	4	
14	3/20/2012	5	
15	3/20/2012	5	
16	3/20/2012	6	
17	3/20/2012	4	
18	3/20/2012	4	
19	3/20/2012	5	
20	3/20/2012	6	
21	3/20/2012	4	
22	3/20/2012	5	
23	4/20/2012	6	
24	4/20/2012	6	
25	4/20/2012	6	
26	4/20/2012	5	
27	4/20/2012	6	



Rdg #	Date	Exposure Rate (μ R/hr)	Comments
28	4/20/2012	6	
29	4/20/2012	5	
30	5/1/2012	7	
31	5/1/2012	6	
32	5/31/2012	4	
33	5/31/2012	4	
34	5/31/2012	6	
35	5/31/2012	4	
36	5/31/2012	5	
37	5/31/2012	4	
38	5/31/2012	4	
39	5/31/2012	4	
40	5/31/2012	4	
41	5/31/2012	4	
42	5/31/2012	4	
43	5/31/2012	5	
44	5/31/2012	4	
45	5/31/2012	5	
46	5/31/2012	5	
47	5/31/2012	5	
48	5/31/2012	4	
49	5/31/2012	5	
50	5/31/2012	4	
51	5/31/2012	6	

Exposure Rate Min: 4.00
Summary (μ R/hr) Avg: 4.94
 Max: 7.00
 St Dev: 0.81



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02320

Project Name Radiological Site Survey		PO Number N/A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section		
Project Location HUNTERS POINT		Project Number 4044-0002		LABORATORY ID				
Sampler Name Ray Robinson		Airbill Number N/A						
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592						
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0008-F001-01	3/20/2012	1245	1		S1			
02NPR-S0008-F002-01	3/20/2012	1250	1		S1			
02NPR-S0008-F003-01	3/20/2012	1255	1		S1			
02NPR-S0008-F004-01	3/20/2012	1260	1		S1			
02NPR-S0008-F005-01	3/20/2012	1305	1		S1			
02NPR-S0008-F006-01	3/20/2012	1310	1		S1			
02NPR-S0008-F007-01	3/20/2012	1315	1		S1			
02NPR-S0008-F008-01	3/20/2012	1320	1		S1			
02NPR-S0008-F009-01	3/20/2012	1325	1		S1			
02NPR-S0008-F010-01	3/20/2012	1330	1		S1			
02NPR-S0008-F011-01	3/20/2012	1335	1		S1			
02NPR-S0008-F012-01	3/20/2012	1340	1		S1			

Relinquished by: (signature) Company		Date 03/20/12	Received by: (signature) Company		LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS	
Relinquished by: (signature) Company		Time 15:20	Received by: (signature) Company		COMPOSITE DESCRIPTION		Notifier FSS SU-8 BIASED 1-2 SYSTEMS C3-22	
Relinquished by: (signature) Company		Date	Received by: (signature) Company		SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY) TEMPERATURE. SAMPLE CONDITION: COOLER SEAL.			
Relinquished by: (signature) Company		Time	Received by: (signature) Company					



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02321

Project Name Radiological Site Survey		PO Number N/A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section			
Project Location HUNTERS POINT		Project Number 4014-0002		LABORATORY ID					
Sampler Name Lisa Bienkowski		Airfill Number N/A							
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592							
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0008-F013-01	3/20/2012	1345	1		S1				
02NPR-S0008-F014-01	3/20/2012	1350	1		S1				
02NPR-S0008-F015-01	3/20/2012	1355	1		S1				
02NPR-S0008-F016-01	3/20/2012	1400	1		S1				
02NPR-S0008-F017-01	3/20/2012	1405	1		S1				
02NPR-S0008-F018-01	3/20/2012	1410	1		S1				
02NPR-S0008-F019-01	3/20/2012	1415	1		S1				
02NPR-S0008-F020-01	3/20/2012	1420	1		S1				
02NPR-S0008-F021-01	3/20/2012	1425	1		S1				
02NPR-S0008-F022-01	3/20/2012	1430	1		S1				

Relinquished by: (signature) Lisa Bienkowski	Date 6/30/12	Received by: (signature) CCT	LABORATORY INSTRUCTIONS/COMMENTS	SAMPLING COMMENTS
Company RSAS	Time 15:20	Company CCT	COMPOSITE DESCRIPTION	
Relinquished by: (signature)	Date	Received by: (signature)	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)	
Company	Time	Company	TEMPERATURE SAMPLE CONDITION COOLER SEAL	
Relinquished by: (signature)	Date	Received by: (signature)		
Company	Time	Company		



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02385

Page 1 of 1

Project Name Radiological Site Survey		PO Number N/A		G A S A M 9 0 H A A S P E C		LABORATORY NAME ONSITE - Curtis & Tomplings, LTD. LABORATORY ID		Project Information Section	
Project Location HUNTERS POINT		Project Number 4044-0002							
Sampler Name JOE CUNNINGHAM		Airbill Number N/A							
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592							
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T 1 2	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0008-F023-01	4/20/2012	1000	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0008-F024-01	4/20/2012	1005	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0008-F025-01	4/20/2012	1010	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0008-F026-01	4/20/2012	1015	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0008-F027-01	4/20/2012	1020	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0008-F028-01	4/20/2012	1025	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0008-F029-01	4/20/2012	1030	1		S1	<input checked="" type="checkbox"/>			

Relinquished by: (signature)		Date	Received by: (signature)	LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS	
Company		4-30-12	Company			NORTH FIER FSS	
Relinquished by: (signature)		Time 1417	Received by: (signature)			SD-8	
Company		Date	Company	COMPOSITE DESCRIPTION		CHARACTERIZATION B2-29	
Relinquished by: (signature)		Time	Company				
Company		Date	Company	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)			
Relinquished by: (signature)		Time	Company	TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:			
Company		Date	Company				



TETRA TECH EC, INC.
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San Diego, CA 92101

Chain-of-Custody Record

BFS 02397

Project Name Radiological Site Survey	PO Number N/A	LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section								
Project Location HUNTERS POINT	Project Number 4044-0002	LABORATORY ID										
Sampler Name Lisa Bienkowski	Airbill Number N/A											
Project Chemist LISA BIENKOWSKI	Project Chemist Phone 949-756-7592											
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T 1 1	G A M M A S P E C	S R 0 A	A L P H A	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0001-F027-01	5/1/2012	1530			S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
02NPR-S0008-F030-01	5/1/2012	1520			S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
02NPR-S0008-F031-01	5/1/2012	1525			S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
02NPR-S0010-F028-01	5/1/2012	1515			S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			

Relinquished by: (signature) [Signature]	Date 05-01-12	Received by: (signature) [Signature]	LABORATORY INFORMATION COMMENTS		SAMPLING COMMENTS	
Company ASPS	Time 1610	Company CF			Notes: [Handwritten notes]	
Relinquished by: (signature)	Date	Received by: (signature)	COMPOSITE DESCRIPTION		Total: [Handwritten total]	
Company	Time	Company			[Handwritten details]	
Relinquished by: (signature)	Date	Received by: (signature)	SAMPLING CONDITIONS (TEMPERATURE, HUMIDITY, WIND DIRECTION, WIND SPEED)		[Handwritten details]	
Company	Time	Company			[Handwritten details]	



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02449

Page 1 of 1

Project Name Radiological Site Survey		PO Number N/A		G A M M A S P E C		S R 9 0 H A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section		
Project Location HUNTERS POINT		Project Number 4044-0002						LABORATORY ID				
Sampler Name R. Roberson		Airbill Number N/A										
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592										
SAMPLE ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	1	1	1	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0008-F032-01	5/31/2012	1000	1		S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
02NPR-S0008-F033-01	5/31/2012	1005	1		S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
02NPR-S0008-F034-01	5/31/2012	1010	1		S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
02NPR-S0008-F035-01	5/31/2012	1015	1		S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
02NPR-S0008-F036-01	5/31/2012	1020	1		S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
02NPR-S0008-F037-01	5/31/2012	1025	1		S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
02NPR-S0008-F038-01	5/31/2012	1030	1		S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	DUP		
02NPR-S0008-F039-01	5/31/2012	1035	1		S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
02NPR-S0008-F040-01	5/31/2012	1040	1		S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
02NPR-S0008-F041-01	5/31/2012	1045	1		S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
02NPR-S0008-F042-01	5/31/2012	1050	1		S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
02NPR-S0008-F043-01	5/31/2012	1055	1		S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			

Relinquished by: (signature) Company RSR		Date 5-31-12	Received by: (signature) Company OCT	
Relinquished by: (signature)		Time 10:12	Received by: (signature)	
Company		Date	Company	
Relinquished by: (signature)		Time	Received by: (signature)	
Company		Date	Company	
Relinquished by: (signature)		Time	Received by: (signature)	
Company		Date	Company	

LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS	
COMPOSITE DESCRIPTION		NORTH PEEL FS	
SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)		50-8	
TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:		SYSTEM NAME 32-51	



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02450

Project Name Radiological Site Survey	PO Number N/A	LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section							
Project Location HUNTERS POINT	Project Number 4044-0002	LABORATORY ID									
Sampler Name L. Robertson	Airbill Number N/A										
Project Chemist LISA BIENKOWSKI	Project Chemist Phone 949-756-7592										
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T	A	T	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0008-F044-01	5/31/2012	1100	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
02NPR-S0008-F045-01	5/31/2012	1105	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
02NPR-S0008-F046-01	5/31/2012	1110	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
02NPR-S0008-F047-01	5/31/2012	1115	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
02NPR-S0008-F048-01	5/31/2012	1120	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
02NPR-S0008-F049-01	5/31/2012	1125	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
02NPR-S0008-F050-01	5/31/2012	1130	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
02NPR-S0008-F051-01	5/31/2012	1135	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			

Relinquished by: (signature) The Bell	Date 5-31-12	Received by: (signature) Curtis
Company BKS	Time 10:12	Company C&T
Relinquished by: (signature)	Date	Received by: (signature)
Company	Time	Company
Relinquished by: (signature)	Date	Received by: (signature)
Company	Time	Company
LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS
COMPOSITE DESCRIPTION		
SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY) TEMPERATURE. SAMPLE CONDITION: COOLER SEAL.		

P:\CTO-02 CAD FILES (RAD EMAC)\DWG FILES\B_WORK AREA 32 TSP\CTO2_WA-32_SURVEY UNITS.DWG
 PLOT/UPDATE: MAY 30 2012 15:24:48

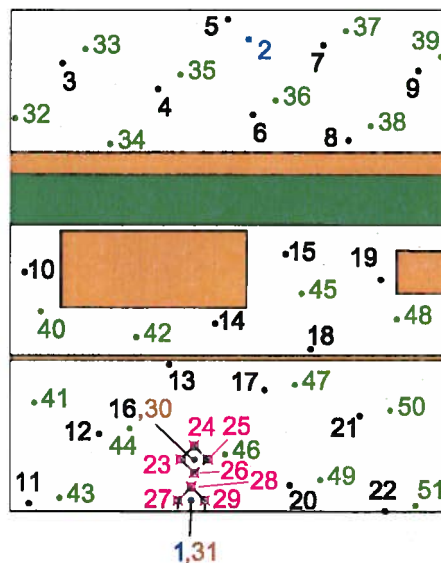
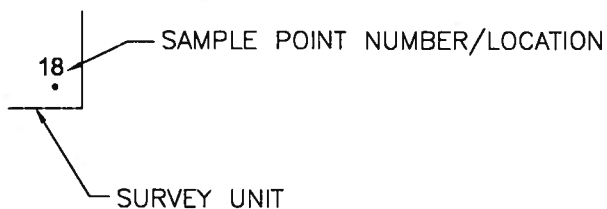


LEGEND:

- 1 BIASED 1-2
- 3 SYSTEMATIC 1 3-22
- ✖ 23 CHARACTERIZATION 23-29
- 25 POST-REMEDIATION 30-31
- 32 SYSTEMATIC 2 32-51

△△ AREAS PREVIOUSLY REMEDIATED

■ ROCK
 ■ CONCRETE



SU-08

CLASS 1

767.33 m² (8259.56 ft²)

RECORD COPY

SCALE 1:40

HUNTERS POINT SHIPYARD
SAN FRANCISCO, CA
 P.O. BOX 884836
 SAN FRANCISCO, CA 94188

NORTH PIER WA-32
SURVEY UNIT 08



TETRA TECH EC, INC
 1230 COLUMBIA STREET, SUITE 750
 SAN DIEGO, CA 92101
 TEL: (619) 234-8690 FAX: (619) 234-8591

Chiu, George

From: Chiu, George
Sent: Thursday, July 05, 2012 10:50 AM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - North Pier Survey Unit 08
Attachments: 02NPR-S0008 032 to 051 Off-Site Gamma.pdf; 02NPR-S0008 Pu and Sr.pdf

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the off-site gamma spec, strontium, and plutonium results for the systematic samples from North Pier Survey Unit 08.

George Chiu | Health Physicist
Office: 415.216.2745 | Cell: 714.270.4009
george.chiu@tetrattech.com

Radiological Survey & Remedial Services
100 Washington Street Suite 200 | Reno, NV 89503
www.radsvcs.com

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Think Green - Not every email needs to be printed.

From: Chiu, George
Sent: Wednesday, June 06, 2012 11:42 AM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - North Pier Survey Unit 08

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the on-site systematic sampling results from North Pier Survey Unit 08.

According to the TSP for North Pier, 100% of the final systematic will be analyzed by gamma spectroscopy at a DoD ELAP approved laboratory. Additionally, 10% of the final systematic will be analyzed for total strontium and Pu-239.

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george.chiu@tetrattech.com

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From: Chiu, George

Sent: Wednesday, May 16, 2012 6:46 PM

To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)

Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan

Subject: HPS Data - North Pier Survey Unit 08

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the total strontium results for the samples with cesium-137 activity above the release criterion from North Pier Survey Unit 08.

George Chiu | Health Physicist

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george.chiu@tetrattech.com

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From: Chiu, George

Sent: Friday, May 11, 2012 9:23 AM

To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)

Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan

Subject: HPS Data - North Pier Survey Unit 08

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the post-remediation sampling results from North Pier Survey Unit 08.

We will proceed with the systematic sampling of this survey unit.

George Chiu | Health Physicist

Office: 415.216.2745 | Cell: 714.270.4009

george.chiu@tetrattech.com

Radiological Survey & Remedial Services

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From: Chiu, George

Sent: Thursday, April 26, 2012 4:52 PM

To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)

Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan

Subject: HPS Data - North Pier Survey Unit 08

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the revised off-site sampling results for samples 01 and 16 from North Pier Survey Unit 08.

Sample points 01 (0.155 pCi/g) and 16 (0.135 pCi/g) have already been remediated due to cesium-137 activity.

George Chiu | Health Physicist

Office: 415.216.2745 | Cell: 714.270.4009

george.chiu@tetrattech.com

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Think Green - Not every email needs to be printed.

From: Chiu, George

Sent: Thursday, April 26, 2012 12:42 PM

To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)

Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan

Subject: HPS Data - North Pier Survey Unit 08

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the characterization sampling results from North Pier Survey Unit 08.

We will proceed with remediation followed by post-remediation sampling.

George Chiu | Health Physicist

Office: 415.216.2745 | Cell: 714.270.4009

george.chiu@tetrattech.com

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100 Washington Street Suite 200 | Reno, NV 89503

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Think Green - Not every email needs to be printed.

From: Chiu, George

Sent: Tuesday, April 17, 2012 9:56 PM

To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)

Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan

Subject: HPS Data - North Pier Survey Unit 08

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the bias and systematic sampling results from North Pier Survey Unit 08. Samples 01, 05, and 16 were recounted at the on-site laboratory for a longer duration at the direction of the laboratory manager. Also attached are the gamma scans, statics, and exposure rate measurements.

We will proceed with characterization/remediation around sample points 01 (0.247 pCi/g) and 16 (0.154 pCi/g) due to cesium-137 activity reported at the off-site laboratory.

George Chiu | Health Physicist

Office: 415.216.2745 | Cell: 714.270.4009

george.chiu@tetrattech.com

Radiological Survey & Remedial Services

100 Washington Street Suite 200 | Reno, NV 89503

www.radsrvcs.com

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TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: March 20, 2012	RAD EMAC – CTO 002
-----------------------------	--------------------

Overview

The HPNS Team continued field activities in Building 241, the North Pier, and Work Areas #32, #33, and #35. Details of the work activities performed are provided in the sections below.

North Pier

- The HPNS Team performed towed array gamma scan surveys over Survey Unit 10.
- The HPNS Team performed Class 1 survey activities for Survey Unit 8. A total of 2 biased and 20 systematic gamma static measurements were logged with a maximum measurement of 6,650 cpm. In addition, 22 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

- Backfill activities were completed in Trench Unit No. 227 (associated with Building 241) by the HPNS Team.
- Backfill activities were initiated in Trench Unit No. 239 by the HPNS Team.
- A variety of housekeeping activities were performed throughout Parcel C by the HPNS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report



TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: March 20, 2012

RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

- The HPNS Team received a total of 27 truckloads of material at RSY4 for processing.
- Following data reviews, the RASO concurred with the staging of ES Unit 0618 pending receipt of the off-site analytical results.

On-Site and Off-Site Laboratories

- On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:
 - Soil samples received for gamma spectroscopy analysis: 63
 - Swipe samples received for Protean counts: 120
 - Air samples received: 12
 - Samples analyzed by gamma spectroscopy: 84
 - Gamma spectroscopy samples recounted: 14
 - Protean swipe samples counted: 120
 - Protean air samples counted: 12
- A total of 277 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.
- A total of 93 samples were sent to TestAmerica St. Louis for analysis.

Basewide Support

- Radiological support was provided to CKY by the HPNS Team during maintenance and landscaping activities at Parcel E-2.
- Radiological support was provided to CE2/Kleinfelder for the transfer of radiologically cleared trash from Buildings 211/253.
- Two outgoing materials and equipment surveys were performed by the HPNS Team.



TETRA TECH EC, INC.

***DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action***

Report Date: March 20, 2012

RMAC – CTO 07

Overview

The HPNS Team continued field activities for the Building 507 Site, the 500 Series Area, and Work Area #36. Details of the activities performed are provided in the sections below.

Building 507 Site

- Towed array gamma scan survey activities were performed by the HPNS Team over Class 1 Survey Unit 1.

500 Series Area

- The HPNS Team performed Class 1 survey activities for Survey Unit 21. A total of 36 systematic gamma static measurements were logged with a maximum measurement of 6,576 cpm. In addition, 36 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPNS Team provided the RASO with off-site analytical results for the systematic samples collected from Class 1 Survey Unit 1. Characterization and remediation will be performed due to the presence of ^{137}Cs contamination at Sample Point 29 (0.14 pCi/g).
- The HPNS Team provided the RASO with on-site analytical and survey results for the systematic samples collected from Class 1 Survey Unit 18. Characterization and remediation will be performed due to the presence of ^{137}Cs contamination as follows:
 - Sample Point 47 (07500SA-S0018-F017-01) with ^{137}Cs at 0.1274 pCi/g
 - Sample Point 48 (07500SA-S0018-F048-01) with ^{137}Cs at 0.134 pCi/g
 - Sample Point 75 (07500SA-S0018-F075-01) with ^{137}Cs at 0.122 pCi/g
- The HPNS Team provided the RASO with off-site analytical results for the systematic samples collected from Class 1 Survey Unit 19. Characterization and remediation will be performed due to the presence of ^{137}Cs contamination as follows:
 - Sample Point 16 (07500SA-S0019-F016-01) with ^{137}Cs at 0.13 pCi/g
 - Sample Point 22 (07500SA-S0019-F022-01) with ^{137}Cs at 0.113 pCi/g
 - Sample Point 23 (07500SA-S0019-F023-01) with ^{137}Cs at 0.159 pCi/g

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- The HPNS Team excavated approximately 324 cubic yards of soil from Work Area #36 and transferred the material to RSY4 for processing. Excavation activities were performed for the following trench segments:
 - 07-E36-14-1W 69 linear feet completed
 - 07-E36-14-1X 30 linear feet completed
 - 07-E36-14-1Y 74 linear feet completed
 - 07-E36-14-1Z 70 linear feet completed
 - 07-E36-14-8Q 12 linear feet completed
- A total of 243 linear feet of trench (including excavated soil, a manhole, and pipes) identified on the design drawings and 12 linear feet not identified on the design drawings was completed by the HPNS Team.
- Manhole MH1307 and pipes excavated from trench segment 07-E36-14-1X were placed on plastic pending further activities.
- The HPNS Team investigated trench segment 07-E36-14-1W for the presence of pipe. Although depicted on the design drawing, no pipe was found during the investigation.
- A sediment sample was collected from excavated Manhole MH1307 (MH0007) by the HPNS Team and submitted to on-site laboratory for analysis.
- Control access points and perimeter fencing was reconfigured by the HPNS Team to facilitate upcoming sewer removal activities along H Street in Work Area #36.
- A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: April 20, 2012

RAD EMAC – CTO 002

Overview

The HPNS Team continued field activities for the North Pier and Work Areas #32 and #34. Details of the work activities performed are provided in the sections below.

North Pier

- The HPNS Team performed Class 1 survey activities as follows:
 - Survey Unit 1 – A total of four characterization gamma static measurements were logged with a maximum measurement of 7,840 cpm. In addition, four soil samples were collected and submitted to the on-site laboratory for analysis.
 - Survey Unit 7 – A total of two characterization gamma static measurements were logged with a maximum measurement of 6,087 cpm. In addition, two soil samples were collected and submitted to the on-site laboratory for analysis.
 - Survey Unit 8 – A total of seven characterization gamma static measurements were logged with a maximum measurement of 6,911 cpm. In addition, seven soil samples were collected and submitted to the on-site laboratory for analysis.
 - Survey Unit 10 – A total of three characterization gamma static measurements were logged with a maximum measurement of 6,691 cpm. In addition, three soil samples were collected and submitted to the on-site laboratory for analysis.
- The RSO is in the process of reviewing the survey data for Survey Units 1, 7, 8, and 10.
- The HPNS Team issued drawings to identify locations for characterization sample collection in Class 1 Survey Unit 8.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

- The HPNS Team excavated approximately 156 cubic yards of soil from Work Area #32 and transferred the material to RSY4 for processing. Excavation activities were performed for the following trench segments:
 - 02-C32-00-1D 45 linear feet completed
 - 02-C32-00-1E 6 linear feet completed
 - 02-C32-00-1F 44 linear feet completed
 - 02-C32-00-1J 12 linear feet completed

- 02-C32-00-1K 15 linear feet completed
- 02-C32-00-8D 62 linear feet completed
- 02-C32-00-8H 50 linear feet completed
- A total of 122 linear feet of trench (including excavated soil, manholes, and pipes) identified on the design drawings and 112 linear feet not identified on the design drawings were completed by the HPNS Team.
- Manholes MH946, MH1334, MH1335 and MH1336 along and pipes excavated from trench segments 02-C32-00-1D, -1E, -1F, -1J, -1K, -8D, and -8H were placed on plastic pending further activities.
- The HPNS Team investigated the entire trench segment 02-C32-00-1F for the presence of pipe. Although depicted on the design drawing, no pipe was found during this investigation.
- A total of two sediment samples were collected from excavated Manholes MH946 (02-PCMH946-064-01) and MH1336 (02-PCMH1336-063-01) by the HPNS Team and submitted to the on-site laboratory for analysis.
- The RSOR provided the HPNS Team with survey results for the excavated manholes and pipe sections detailed in Survey Nos. HPS-PCPIPE-041312-051, HPS-PCPIPE-041312-052, and HPS-PCPIPE-041612-053. Because no activity above the release criteria was identified, these 17 manholes and 11 pipe sections were released for transfer to the recycling stockpiles near Building 411.
- Metal rail track encountered during Work Area #32 trench excavations was sized and staged for transfer to the recycling bins near Building 411.
- A variety of housekeeping activities were performed throughout Parcel C by the HPNS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report



TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: April 20, 2012

RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

- The HPNS Team performed towed array survey activities for ES Units 0686 and 0687 at RSY3.
- The HPNS Team performed the following RSY4 processing activities:
 - A total of 13 truckloads of material were received for processing.
 - Towed array survey activities were performed for ES Units 0645, 0678, 0681, 0683, 0692, and 0693.
 - ES Units 0659 and 0674 were staged in the stockpile area pending receipt of the off-site analytical results.
 - Began transfer of ES Unit 0675 to the stockpile area.
- The HPNS Team continued radiological monitoring and control activities for the RSYs including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring, as appropriate.

On-Site and Off-Site Laboratories

- On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:
 - Soil samples received for gamma spectroscopy analysis: 36
 - Swipe samples received for Protean counts: 128
 - Air samples received: 10
 - Samples analyzed by gamma spectroscopy: 25
 - Gamma spectroscopy samples recounted: 5
 - Protean swipe samples counted: 40
 - Protean air samples counted: 10
- A total of 188 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: April 20, 2012

RMAC – CTO 07

Overview

The HPNS Team continued field activities for Shacks 79 and 80, the 500 Series Area, and Work Area #36. Details of the activities performed are provided in the sections below.

Shacks 79 and 80

- The HPNS Team performed Class 1 survey activities for Survey Unit 1. A total of two systematic gamma static measurements were logged with a maximum measurement of 5,807 cpm. In addition, two soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

500 Series Area

- The HPNS Team exposed asphalt and continued soil grading and debris removal in preparation for towed array surveys in Class 2 Survey Unit 23.
- Asphalt covering Survey Unit 23 (near Building 505) was removed, scanned, and staged within the Class 2 survey boundaries; no elevated readings were identified during the scanning activities.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: May 1, 2012	RAD EMAC – CTO 002
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Overview

The HPNS Team continued field activities for the North Pier and Work Areas #31, #32, and #34. Details of the work activities performed are provided in the sections below.

North Pier

- The HPNS Team performed Class 1 survey activities as follows:
 - Survey Unit 1 – A post-remediation gamma static measurement was logged at 4,909 cpm and one soil sample was collected and submitted to the on-site laboratory for analysis.
 - Survey Unit 8 – A total of two post-remediation gamma static measurements were logged with a maximum measurement of 7,183 cpm. In addition, two soil samples were collected and submitted to the on-site laboratory for analysis.
 - Survey Unit 10 – A post-remediation gamma static measurement was logged at 8,245 cpm and one soil sample was collected and submitted to the on-site laboratory for analysis.
 - Survey Unit 11 – A total of three characterization gamma static measurements were logged with a maximum measurement of 5,612 cpm. In addition, three soil samples were collected and submitted to the on-site laboratory for analysis.
- The RSO is in the process of reviewing the survey data for Survey Units 1, 8, 10, and 11.
- The HPNS Team provided the RASO with on-site analytical results for the characterization samples collected from Class1 Survey Unit 7. Because no activity above the release criteria was identified, remediation followed by post-remediation sample collection will be performed.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

- Radiologically surveyed and released excavated manholes (Survey Nos. HPS-PCPIPE-121211-040 and HPS-PCPIPE-041612-053) were transferred to stockpiles near Building 411 pending off-site disposal or recycling.
- Backfill activities were initiated for Trench Unit No. 236 by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report



TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: May 01, 2012

RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

- The HPNS Team received a total of six truckloads of material at RSY3 for processing.
- The HPNS Team performed the following RSY4 processing activities:
 - A total of 11 truckloads of material were received for processing.
 - Issued drawing to identify biased and systematic sample collection locations for ES Unit 0685.
 - A total of 5 biased and 18 systematic soil samples were collected from ES Unit 0695 and submitted to the on-site laboratory for analysis.
- The HPNS Team continued radiological monitoring and control activities for the RSYs including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring, as appropriate.
- The HPNS Team provided the RASO with the following:
 - On-site analytical data for ES Unit 0678 and a request for concurrence to stage the material pending receipt of the off-site analytical results prior to transferring to the DON non-LLRW contactor for off-site disposal at a CERCLA landfill.
 - On-site analytical data for ES Units 0683 and 0687 along with requests for concurrence to stage the materials pending receipt of the off-site analytical results.

Basewide Support

- Radiological support was provided to CKY by the HPNS Team during landscaping activities at Parcel E-2.

On-Site and Off-Site Laboratories

- On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:
 - Soil samples received for gamma spectroscopy analysis: 30
 - Swipe samples received for Protean counts: 152
 - Air samples received: 13
 - Samples analyzed by gamma spectroscopy: 87
 - Gamma spectroscopy samples recounted: 8
 - Protean swipe samples counted: 23
 - Protean air samples counted: 13
- A total of 323 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.
- A total of 119 samples were sent to TestAmerica St. Louis for analysis.



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: May 1, 2012

RMAC – CTO 07

Overview

The HPNS Team continued field activities for the Building 707 Triangle, the 500 Series Area, and Work Areas #21 and #36. Details of the activities performed are provided below.

Building 707 Triangle

- A total of 49 cubic yards of soil were remediated from Class 1 Survey Units 21 and 22 by the HPNS Team and placed in LLRW bins AWIU000261, ERRU000145, and GFLU001030T1 for off-site disposal.
- The HPNS Team performed Class 1 survey activities as follows:
 - Asphalt Grid A7 – A total of 550 alpha/beta scan readings were logged. The preliminary data indicates the presence of beta activity above the release limit in one scan reading logged at 1,100 dpm/100 cm².
 - Survey Unit 22 – A total of four post-remediation gamma static measurements were logged with maximum measurements of 194 cpm (FIDLER) and 5,034 cpm. In addition, two soil samples were collected and submitted to the off-site laboratory for total strontium analysis.
- The RSO is in the process of reviewing the survey data for Asphalt Grid A7 and Survey Unit 22.

500 Series Area

- The HPNS Team provided the RASO with on-site analytical results for the characterization samples collected from Class 1 Survey Units 13, 16, and 18. Because no activity above the release criteria was identified, remediation followed by post-remediation sample collection activities will be performed.
- The HPNS Team provided the RASO with on-site analytical results for the biased and systematic samples collected from Class 1 Survey Unit 14. Characterization and remediation will be continued due to the presence of ¹³⁷Cs contamination as follows:
 - Sample Point 7 (07500SA-S0014-F007-01) with ¹³⁷Cs at 0.1183 pCi/g
 - Sample Point 17 (07500SA-S0014-F017-01) with ¹³⁷Cs at 0.2425 pCi/g
 - Sample Point 37 (07500SA-S0014-F037-01) with ¹³⁷Cs at 0.3768 pCi/g

- The HPNS Team provided the RASO with on-site analytical results for the additional characterization samples collected from Class 1 Survey Units 19 and 21. Because no activity above the release criteria was identified, no further remediation will be performed in these survey units.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- The HPNS Team excavated approximately 204 cubic yards of soil from Work Area #36 and transferred materials to both RSY3 and RSY4 for processing. Excavation activities were performed for the following trench segments:
 - 07-E36-00-7F 133 linear feet completed
 - 07-E36-00-7G 10 linear feet completed
 - 07-E36-00-7H 12 linear feet completed
 - 07-E36-00-7I 6 linear feet completed
 - 07-E36-00-8Y 25 linear feet completed
- A total of 161 linear feet of trench (including excavated soil, a manhole, and pipes) identified on the design drawings and 25 linear feet not identified on the design drawings were completed by the HPNS Team.
- Excavated Manhole MH1244 was placed on plastic pending further activities.
- The HPNS Team provided the RASO with analytical results for the sediment samples collected from Manholes MH1302 and MH1303. Both manholes will be placed in LLRW bins for off-site disposal due to the presence of ^{137}Cs contamination as follows:
 - Manhole MH1302 (07-PEMH1302-013-01) with ^{137}Cs at 0.2161 pCi/g
 - Manhole MH1303 (07-PEMH1303-014-01) with ^{137}Cs at 0.1319 pCi/g
- The HPNS Team provided the RASO with analytical results for the investigative samples collected from Trench Unit No. 249. Characterization and remediation will be performed due to the presence of ^{137}Cs contamination at Sample Point 17 (0.2726 pCi/g).
- The HPNS Team provided the RASO with analytical results for the systematic samples collected from Trench Unit No. 248; no activity above the release criteria was identified.
- A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: May 31, 2012

RAD EMAC – CTO 002

Overview

The HPNS Team continued field activities for Buildings 211, 231, and 253; the North Pier; and Work Areas #32 through #35. Details of the work activities performed are provided below.

North Pier

- The HPNS Team performed Class 1 survey activities as follows:
 - Survey Unit 1 – A total of 20 systematic gamma static measurements were logged with a maximum measurement of 6,227 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis.
 - Survey Unit 8 – A total of 20 systematic gamma static measurements were logged with a maximum measurement of 6,104 cpm and 20 soil samples were collected and submitted to the on-site laboratory for analysis.
 - Survey Unit 10 – A total of 20 systematic gamma static measurements were logged with a maximum measurement of 6,110 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis.
 - Survey Unit 11 – A total of 20 systematic gamma static measurements were logged with a maximum measurement of 6,599 cpm and 20 soil samples were collected and submitted to the on-site laboratory for analysis.
- The RSO is in the process of reviewing the survey data for Survey Units 1, 8, 10, and 11.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

- A total of 18 systematic samples were collected from Trench Unit No. 304 (associated with the North Pier) by the HPNS Team and submitted to the on-site laboratory for analysis.
- Backfill activities were continued for Trench Unit No. 238 (associated with Buildings 211, 231, and 253) by the HPNS Team.
- The HPNS Team and the RASO concurred on backfilling of Trench Unit No. 242.
- The HPNS Team issued an updated Parcel C Trench Survey Unit Key Plan and Figures 1-1/3-1 for inclusion in the Internal Draft SUPR for Trench Unit No. 302.
- Site restoration activities were performed by the HPNS Team over backfilled trench units in Work Area #33.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report



TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: May 31, 2012

RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

- The HPNS Team received a total of 13 truckloads of material at RSY3 for processing.
- The HPNS Team performed the following RSY4 processing activities:
 - A total of 13 truckloads of material were received for processing.
 - Began transfer of ES Unit 0700 to the stockpile area.
- The HPNS Team provided the RASO with the off-site laboratory analytical results for ES Unit 0686 and a request for concurrence to use the materials as trench backfill.
- The HPNS Team continued radiological monitoring and control activities for the RSYs including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring, as appropriate.
- After evaluating the data, the RASO concurred with the following:
 - Transferring ES Unit 0678 to the DON non-LLRW contractor for off-site disposal at a CERCLA landfill.
 - Reuse of ES Units 0658, 0685, 0687, and 0688 as trench backfill.

Basewide Support

- One outgoing materials and equipment survey was performed by the HPNS Team.

On-Site and Off-Site Laboratories

- On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:
 - Soil samples received for gamma spectroscopy analysis: 140
 - Swipe samples received for Protean counts: 151
 - Air samples received: 13

- Samples analyzed by gamma spectroscopy: 76
- Gamma spectroscopy samples recounted: 13
- Protean swipe samples counted: 20
- Protean air samples counted: 16
- A total of 227 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.
- A total of 71 samples were sent to TestAmerica St. Louis for analysis.



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: May 31, 2012

RMAC – CTO 07

Overview

The HPNS Team continued field activities for the Building 520 Site, the 500 Series Area, and Work Area #36. Details of the activities performed are provided in the sections below.

Building 520 Site

- The HPNS Team provided the RASO with off-site analytical results for the systematic samples collected from Class 1 Survey Unit 4. Characterization and remediation will be performed due to the presence of ^{90}Sr contamination at Sample Point 61 (0.365 pCi/g).

500 Series Area

- The HPNS Team continued soil grading and debris removal in preparation for upcoming survey activities in Class 2 Survey Units 22 and 23.
- The HPNS Team performed Class 1 survey activities for Survey Unit 17. A total of six characterization gamma static measurements were logged with a maximum measurement of 6,340 cpm. In addition, six soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPNS Team provided the RASO with total strontium analytical results for the ^{137}Cs contaminated samples collected from Class 1 Survey Unit 17; no further contamination was identified.
- The HPNS Team issued drawings to identify locations for characterization sample collection in Class 1 Survey Unit 17.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- The HPNS Team excavated approximately 312 cubic yards of soil from Work Area #36 and transferred the material to both RSY3 and RSY4 for processing. Excavation activities were performed for the following trench segments:
 - 07-E36-00-4D 10 linear feet completed
 - 07-E36-00-4E 51 linear feet completed
 - 07-E36-00-4F 5 linear feet completed
 - 07-E36-00-4G 27 linear feet completed
 - 07-E36-38-1U 35 linear feet completed

- 07-E36-38-1V 39 linear feet completed
 - 07-E36-38-1W 38 linear feet completed
 - 07-E36-38-2B 17 linear feet completed
 - 07-E36-38-4A 9 linear feet completed
 - 07-E36-38-5A 10 linear feet completed
- A total of 241 linear feet of trench (including excavated soil, manholes, and pipes) identified on the design drawings was completed by the HPNS Team.
 - Excavated Manholes MH1257, MH1261, MH1266, and MH1267 were placed on plastic pending further activities.
 - The HPNS Team investigated trench segment 07-E36-38-1U for the presence of pipe. Although depicted on the design drawing, no pipe was found during the investigation.
 - A total of four sediment samples were collected from excavated Manholes MH1257, MH1261, MH1266, and MH1267 (MH0016 through MH0019) by the HPNS Team and submitted to the on-site laboratory for analysis.
 - Survey activities were performed by the HPNS Team for pipe sections removed from trench segment 07-E36-39-1R (Survey No. HPS-PEPIPE-053112-048). During the survey activities, a total of six swipe samples were collected and submitted to the on-site laboratory for analysis.
 - Survey activities were performed by the HPNS Team on concrete pipe bedding material removed from Trench Unit No. 307 (Survey No. HPS-A-TU307-001). During the survey activities, a total of eight swipe samples were collected and submitted to the on-site laboratory for analysis.
 - The HPNS Team issued an updated Parcel E Trench Survey Unit Key Plan and Figures 1-1/3-1 for inclusion in the Internal Draft SUPR for Trench Unit No. 301.
 - A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

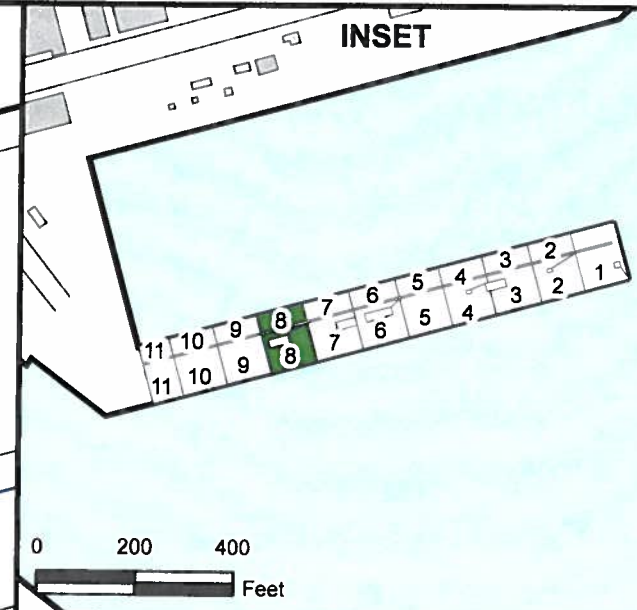
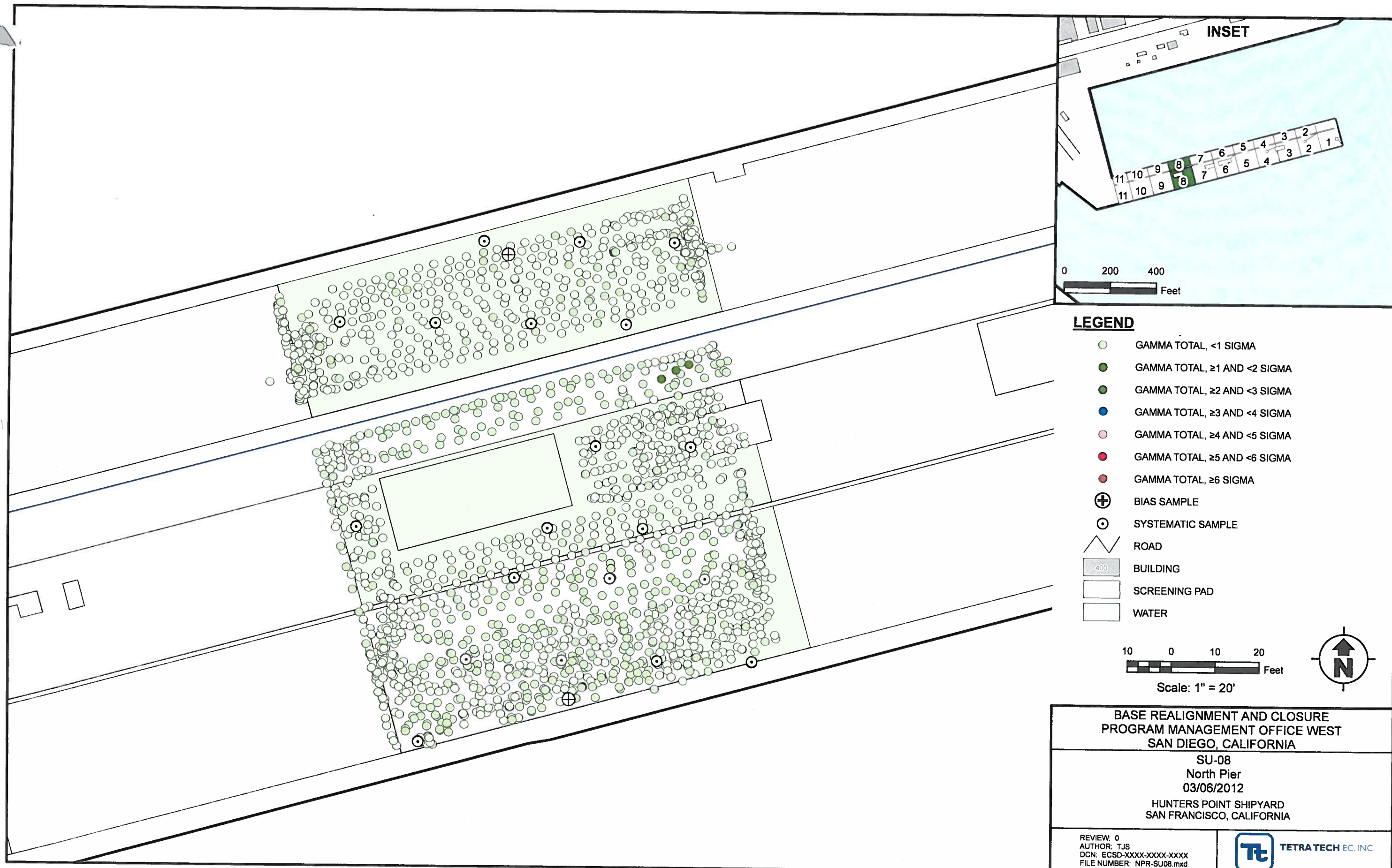
Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report

Area	Survey Unit	Sample Point	Sample Type	Sample ID	Date Collected	COC Radiological Technician
NPR	8	1	Biased	02NPR-S0008-F001-01	20-Mar-12	Ray Roberson
NPR	8	2	Biased	02NPR-S0008-F002-01	20-Mar-12	Ray Roberson
NPR	8	3	Systematic	02NPR-S0008-F003-01	20-Mar-12	Ray Roberson
NPR	8	4	Systematic	02NPR-S0008-F004-01	20-Mar-12	Ray Roberson
NPR	8	5	Systematic	02NPR-S0008-F005-01	20-Mar-12	Ray Roberson
NPR	8	6	Systematic	02NPR-S0008-F006-01	20-Mar-12	Ray Roberson
NPR	8	7	Systematic	02NPR-S0008-F007-01	20-Mar-12	Ray Roberson
NPR	8	8	Systematic	02NPR-S0008-F008-01	20-Mar-12	Ray Roberson
NPR	8	9	Systematic	02NPR-S0008-F009-01	20-Mar-12	Ray Roberson
NPR	8	10	Systematic	02NPR-S0008-F010-01	20-Mar-12	Ray Roberson
NPR	8	11	Systematic	02NPR-S0008-F011-01	20-Mar-12	Ray Roberson
NPR	8	12	Systematic	02NPR-S0008-F012-01	20-Mar-12	Ray Roberson
NPR	8	13	Systematic	02NPR-S0008-F013-01	20-Mar-12	Ray Roberson
NPR	8	14	Systematic	02NPR-S0008-F014-01	20-Mar-12	Ray Roberson
NPR	8	15	Systematic	02NPR-S0008-F015-01	20-Mar-12	Ray Roberson
NPR	8	16	Systematic	02NPR-S0008-F016-01	20-Mar-12	Ray Roberson
NPR	8	17	Systematic	02NPR-S0008-F017-01	20-Mar-12	Ray Roberson
NPR	8	18	Systematic	02NPR-S0008-F018-01	20-Mar-12	Ray Roberson
NPR	8	19	Systematic	02NPR-S0008-F019-01	20-Mar-12	Ray Roberson
NPR	8	20	Systematic	02NPR-S0008-F020-01	20-Mar-12	Ray Roberson
NPR	8	21	Systematic	02NPR-S0008-F021-01	20-Mar-12	Ray Roberson
NPR	8	22	Systematic	02NPR-S0008-F022-01	20-Mar-12	Ray Roberson
NPR	8	23	Characterization	02NPR-S0008-F023-01	20-Apr-12	Joe Cunningham
NPR	8	24	Characterization	02NPR-S0008-F024-01	20-Apr-12	Joe Cunningham
NPR	8	25	Characterization	02NPR-S0008-F025-01	20-Apr-12	Joe Cunningham
NPR	8	26	Characterization	02NPR-S0008-F026-01	20-Apr-12	Joe Cunningham
NPR	8	27	Characterization	02NPR-S0008-F027-01	20-Apr-12	Joe Cunningham
NPR	8	28	Characterization	02NPR-S0008-F028-01	20-Apr-12	Joe Cunningham
NPR	8	29	Characterization	02NPR-S0008-F029-01	20-Apr-12	Joe Cunningham
NPR	8	30	Post-Remediation	02NPR-S0008-F030-01	01-May-12	Ray Roberson
NPR	8	31	Post-Remediation	02NPR-S0008-F031-01	01-May-12	Ray Roberson
NPR	8	32	Systematic	02NPR-S0008-F032-01	31-May-12	Ray Roberson
NPR	8	33	Systematic	02NPR-S0008-F033-01	31-May-12	Ray Roberson
NPR	8	34	Systematic	02NPR-S0008-F034-01	31-May-12	Ray Roberson
NPR	8	35	Systematic	02NPR-S0008-F035-01	31-May-12	Ray Roberson
NPR	8	36	Systematic	02NPR-S0008-F036-01	31-May-12	Ray Roberson
NPR	8	37	Systematic	02NPR-S0008-F037-01	31-May-12	Ray Roberson
NPR	8	38	Systematic	02NPR-S0008-F038-01	31-May-12	Ray Roberson
NPR	8	39	Systematic	02NPR-S0008-F039-01	31-May-12	Ray Roberson
NPR	8	40	Systematic	02NPR-S0008-F040-01	31-May-12	Ray Roberson
NPR	8	41	Systematic	02NPR-S0008-F041-01	31-May-12	Ray Roberson
NPR	8	42	Systematic	02NPR-S0008-F042-01	31-May-12	Ray Roberson
NPR	8	43	Systematic	02NPR-S0008-F043-01	31-May-12	Ray Roberson
NPR	8	44	Systematic	02NPR-S0008-F044-01	31-May-12	Ray Roberson
NPR	8	45	Systematic	02NPR-S0008-F045-01	31-May-12	Ray Roberson
NPR	8	46	Systematic	02NPR-S0008-F046-01	31-May-12	Ray Roberson
NPR	8	47	Systematic	02NPR-S0008-F047-01	31-May-12	Ray Roberson
NPR	8	48	Systematic	02NPR-S0008-F048-01	31-May-12	Ray Roberson
NPR	8	49	Systematic	02NPR-S0008-F049-01	31-May-12	Ray Roberson
NPR	8	50	Systematic	02NPR-S0008-F050-01	31-May-12	Ray Roberson
NPR	8	51	Systematic	02NPR-S0008-F051-01	31-May-12	Ray Roberson

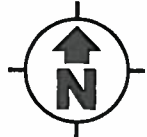
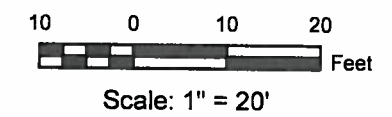
On-Site Laboratory (pCi/g)				
K-40	Ra-226	Cs-137	Bi-214	Pb-214
10.23	0.4935	0.09523	0.3345	0.3563
15.59	0.4919	0.008754	0.4062	0.3538
17.79	0.7996	0.02298	0.3357	0.5055
22.02	1.142	0.00361	0.3574	0.586
22.48	0.86	0	0.4879	0.5993
15.63	0.753	0.003367	0.3858	0.4654
20.89	1.062	0.03326	0.5734	0.7284
10.85	0.898	0	0.2166	0.3062
19.75	0.4181	0.01431	0.5938	0.6163
6.647	0.3868	0.003048	0.3405	0.2864
14.76	0.7004	0.01891	0.5639	0.5523
7.6	0.4106	0.01558	0.3676	0.3642
7.446	0.5572	0.005382	0.1316	0.1788
13.7	0.5567	0.0002504	0.461	0.3541
9.2	1.372	0	0.1433	0.3839
10.18	0.521	0.1015	0.3462	0.3982
6.148	0.2883	0	0.1326	0.1466
9.668	1.051	0.01413	0.4937	0.3884
10.33	0.5413	-0.01	0.593	0.6043
10.05	0.7987	0.03273	0.1227	0.3978
6.577	0.218	0.03881	0.3036	0.324
6.708	0.4742	-0.003141	0.1273	0.2826
8.291	0.629	0.0218	0.3592	0.4075
9.068	0.2572	-0.003712	0.1159	0.2874
8.288	0.257	0.00955	0.04536	0.3301
8.834	0.2725	0.0001099	0.06355	0.2194
9.65	0.5286	0.04645	0.3001	0.3547
8.243	0.3939	0.05781	0.3784	0.3605
9.473	-0.2305	0.02772	0.3565	0.3035
12.13	0.1902	0.008937	0.3832	0.454
10.58	0.4347	-0.007061	0.4676	0.5156
1.937	0.09594	-0.001212	0.04871	0.1684
0.7828	-0.1865	0.01881	0.08627	0.08277
1.061	0.2093	0.009134	-0.0001145	0.1194
0.9234	0.2225	0	0.1188	0.08785
2.004	0.4195	-0.004758	0.04809	0.0725
1.132	0.2549	-0.005983	0.2273	0.1908
0.6315	0.1172	-0.0004218	0.1033	0.06921
1.258	0.2758	-0.0002623	0.05634	0.1785
1.49	-0.07547	0.0003182	0.0362	0.1261
0.9979	0.4165	0	0.07761	0.1752
0.9346	0.1941	-0.004913	0.09914	0.2
1.54	-0.01456	-0.00313	0.1027	0.05463
1.542	0	0	0.06731	0.1201
1.238	0.01633	0	0.08637	0.2584
1.464	0	0.001993	0.07479	0.1781
1.131	0.3498	0.003476	0.09405	0.03624
0.9271	0.3262	-0.002614	0.06878	0.1388
1.481	0.2473	0	0.1782	0.09971
1.472	0.4613	-0.006526	0.1717	0.1271
1.183	0.3082	0	0.1457	0.2437

Off-Site Laboratory (pCi/g)				
K-40	Ra-226	Cs-137	Bi-214	Pb-214
10.1	0.29	0.155	0.29	0.311
9.48	0.448	0.135	0.448	0.452
0.944	0.292	0	0.292	0.284
1.3	0.174	-0.000734	0.174	0.323
1.38	0.179	0	0.179	0.215
1.25	0.213	0	0.213	0.187
1.73	0.262	-0.0142	0.262	0.192
0.707	0.00926	0.00795	0.00926	0.174
1.51	0.188	0.000663	0.188	0.251
1.57	0.0812	-0.00777	0.0812	0.232
1.15	0.316	-0.0191	0.316	0.16
1.61	0.276	0.00618	0.276	0.24
1.23	0.154	0.000856	0.154	0.241
0.738	0.0457	-0.00545	0.0457	0.172
1.19	0.101	0.00828	0.101	0.0914
1.56	0.216	0.00978	0.216	0.143
1.56	0.0449	0.0147	0.0449	0.265
0.48	0.316	0.00633	0.316	0.291
1.51	0.0728	0.00455	0.0728	0.24
1.66	0.337	-0.0244	0.337	0.26
1.33	0.231	0.00316	0.231	0.316
1.26	0.201	0	0.201	0.254



LEGEND

- GAMMA TOTAL, <1 SIGMA
- GAMMA TOTAL, ≥1 AND <2 SIGMA
- GAMMA TOTAL, ≥2 AND <3 SIGMA
- GAMMA TOTAL, ≥3 AND <4 SIGMA
- GAMMA TOTAL, ≥4 AND <5 SIGMA
- GAMMA TOTAL, ≥5 AND <6 SIGMA
- GAMMA TOTAL, ≥6 SIGMA
- BIAS SAMPLE
- SYSTEMATIC SAMPLE
- ROAD
- BUILDING
- SCREENING PAD
- WATER



BASE REALIGNMENT AND CLOSURE
PROGRAM MANAGEMENT OFFICE WEST
SAN DIEGO, CALIFORNIA

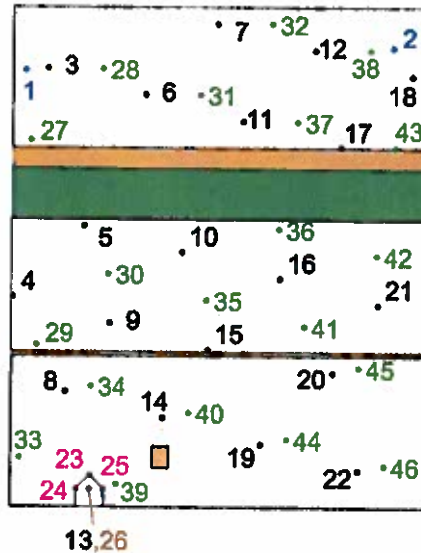
SU-08
North Pier
03/06/2012

HUNTERS POINT SHIPYARD
SAN FRANCISCO, CALIFORNIA

REVIEW: 0
AUTHOR: TJS
DCN: ECSD-XXXX-XXXX-XXXX
FILE NUMBER: NPR-SU08.mxd



P:\CTO-02 CAD FILES (RAD EMAC)\DWG FILES\B_WORK AREA 32 TSP\CTO2_WA-32_SURVEY UNITS.DWG
PLOT/UPDATE: MAY 30 2012 15:18:47



SU-10

CLASS 1

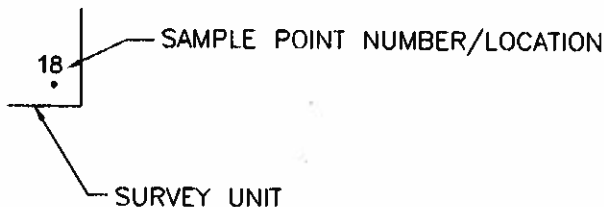
793.91 m² (8545.63 ft²)

LEGEND:

- 1 BIASED 1-2
- 3 SYSTEMATIC 1 3-22
- 23 CHARACTERIZATION 23-25
- 26 POST-REMEDIATION 26
- 32 SYSTEMATIC 2 27-46

△△ AREAS PREVIOUSLY REMEDIATED

- ROCK
- CONCRETE



RECORD COPY

SCALE 1:40

HUNTERS POINT SHIPYARD
SAN FRANCISCO, CA
P.O. BOX 884836
SAN FRANCISCO, CA 94188

NORTH PIER WA-32
SURVEY UNIT 10



TETRA TECH EC, INC
1230 COLUMBIA STREET, SUITE 750
SAN DIEGO, CA 92101
TEL: (619) 234-8690 FAX: (619) 234-8591



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: NPR Survey Unit: 10 Class: 1 Area: 793.91 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1	3/22/2012 9:36	5310	6386	-1076	600-BKGD51B	6765	
2	3/22/2012 9:37	6505	6386	119	600-BKGD51B	6765	
3	3/22/2012 9:39	5724	6386	-662	600-BKGD51B	6765	
4	3/22/2012 9:40	3956	6386	-2430	600-BKGD51B	6765	
5	3/22/2012 9:42	6197	6386	-189	600-BKGD51B	6765	
6	3/22/2012 9:43	5504	6386	-882	600-BKGD51B	6765	
7	3/22/2012 9:45	5490	6386	-896	600-BKGD51B	6765	
8	3/22/2012 9:46	3237	6386	-3149	600-BKGD51B	6765	
9	3/22/2012 9:48	4927	6386	-1459	600-BKGD51B	6765	
10	3/22/2012 9:49	3999	6386	-2387	600-BKGD51B	6765	
11	3/22/2012 9:51	4169	6386	-2217	600-BKGD51B	6765	
12	3/22/2012 9:52	5999	6386	-387	600-BKGD51B	6765	
13	3/22/2012 9:54	5884	6386	-502	600-BKGD51B	6765	
14	3/22/2012 9:55	3343	6386	-3043	600-BKGD51B	6765	
15	3/22/2012 9:57	3716	6386	-2670	600-BKGD51B	6765	
16	3/22/2012 9:58	3617	6386	-2769	600-BKGD51B	6765	
17	3/22/2012 9:59	5726	6386	-660	600-BKGD51B	6765	
18	3/22/2012 10:01	5881	6386	-505	600-BKGD51B	6765	
19	3/22/2012 10:03	3359	6386	-3027	600-BKGD51B	6765	
20	3/22/2012 10:04	3560	6386	-2826	600-BKGD51B	6765	
21	3/22/2012 10:06	3779	6386	-2607	600-BKGD51B	6765	
22	3/22/2012 10:07	5696	6386	-690	600-BKGD51B	6765	
23	4/20/2012 13:40	6962	6386	576	600-BKGD51B	6765	
24	4/20/2012 13:41	6435	6386	49	600-BKGD51B	6765	
25	4/20/2012 13:42	6381	6386	-5	600-BKGD51B	6765	
26	5/1/2012 15:07	8245	6386	1859	600-BKGD51B	6765	
27	5/31/2012 15:41	4881	6808	-1927	630-BKGD51B	8141	
28	5/31/2012 15:42	5694	6808	-1114	630-BKGD51B	8141	
29	5/31/2012 15:43	3301	6808	-3507	630-BKGD51B	8141	
30	5/31/2012 15:45	3533	6808	-3275	630-BKGD51B	8141	
31	5/31/2012 15:46	4865	6808	-1943	630-BKGD51B	8141	
32	5/31/2012 15:47	6110	6808	-698	630-BKGD51B	8141	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: NPR Survey Unit: 10 Class: 1 Area: 793.91 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
33	5/31/2012 15:48	3673	6808	-3135	630-BKGDS1B	8141	
34	5/31/2012 15:49	3438	6808	-3370	630-BKGDS1B	8141	
35	5/31/2012 15:50	3035	6808	-3773	630-BKGDS1B	8141	
36	5/31/2012 15:51	4766	6808	-2042	630-BKGDS1B	8141	
37	5/31/2012 15:52	5604	6808	-1204	630-BKGDS1B	8141	
38	5/31/2012 15:53	5462	6808	-1346	630-BKGDS1B	8141	
39	5/31/2012 15:55	5240	6808	-1568	630-BKGDS1B	8141	
40	5/31/2012 15:56	3397	6808	-3411	630-BKGDS1B	8141	
41	5/31/2012 15:57	4600	6808	-2208	630-BKGDS1B	8141	
42	5/31/2012 15:58	3771	6808	-3037	630-BKGDS1B	8141	
43	5/31/2012 15:59	3880	6808	-2928	630-BKGDS1B	8141	
44	5/31/2012 16:00	3228	6808	-3580	630-BKGDS1B	8141	
45	5/31/2012 16:02	3839	6808	-2969	630-BKGDS1B	8141	
46	5/31/2012 16:03	3103	6808	-3705	630-BKGDS1B	8141	

Net Gamma cpm Min: -3773

Summary Avg: -1808

Max: 1859

St Dev: 1350

Readings > 3σ investigation level are highlighted in blue

* Background ID correlates to instrument reference area background identification number

Gamma measurements > 3σ investigation level are verified by 2360 beta measurements



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: NPR Survey Unit: 10 Class: 1 Area: 793.91 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

2350 Identification #: 600

Instrument/Probe Type: 2350-1 / 44-10

Instrument Serial #: 95360

Probe Serial #: 192597

Calibration Due Date: 6/8/2012

Reference Area Background Identification #: 600-BKGDS1B Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	09/08/2011 13:56	6403
2	09/08/2011 13:57	6371
3	09/08/2011 13:58	6445
4	09/08/2011 13:59	6476
5	09/08/2011 13:01	6384
6	09/08/2011 13:04	6441
7	09/08/2011 13:09	6015
8	09/08/2011 13:11	6189
9	09/08/2011 13:13	6336
10	09/08/2011 13:14	6452
11	09/08/2011 13:15	6517
12	09/08/2011 13:16	6495
13	09/08/2011 13:17	6459
14	09/08/2011 13:18	6549
15	09/08/2011 13:19	6418
16	09/08/2011 13:20	6428
17	09/08/2011 13:22	6278
18	09/08/2011 13:32	6226
19	09/08/2011 13:33	6377
20	09/08/2011 13:34	6456

Gamma Mean Background (cpm): 6386

Standard Deviation: 127

Gamma 3 σ Investigation
Level (cpm): 6765



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: NPR Survey Unit: 10 Class: 1 Area: 793.91 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

2350 Identification #: 630

Instrument/Probe Type: 2350-1 / 44-10

Instrument Serial #: 120588

Probe Serial #: 081878

Calibration Due Date: 10/16/2012

Reference Area Background Identification #: 630-BKGDS1B Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	05/23/2012 13:42	6777
2	05/23/2012 13:43	6444
3	05/23/2012 13:44	7288
4	05/23/2012 13:45	7319
5	05/23/2012 13:47	6473
6	05/23/2012 13:48	6801
7	05/23/2012 13:49	7364
8	05/23/2012 13:50	7091
9	05/23/2012 13:51	6567
10	05/23/2012 13:53	5952
11	05/23/2012 13:55	6739
12	05/23/2012 13:56	6778
13	05/23/2012 13:58	6925
14	05/23/2012 13:59	6047
15	05/23/2012 14:00	6022
16	05/23/2012 14:02	7217
17	05/23/2012 14:03	6857
18	05/23/2012 14:05	7209
19	05/23/2012 14:07	7323
20	05/23/2012 14:08	6960

Gamma Mean Background (cpm): 6808

Standard Deviation: 444

Gamma 3 σ Investigation
Level (cpm): 8141



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Exposure Rate Measurements

Page 1

Site Area: NPR Survey Unit: 10 Class: 1 Area: 793.91 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Instrument Model:	Model 19	Reference Area Background Identification #:	636-BKGDS1
Instrument Serial Number:	115870	Reference Area Background Location:	Parcel D-1 Reference
Instrument Calibration Due Date:	10/10/2012	Exposure Rate Background (µR/hr):	5

Rdg #	Date	Exposure Rate (µR/hr)	Comments
1	3/22/2012	6	
2	3/22/2012	7	
3	3/22/2012	6	
4	3/22/2012	4	
5	3/22/2012	5	
6	3/22/2012	7	
7	3/22/2012	6	
8	3/22/2012	4	
9	3/22/2012	5	
10	3/22/2012	5	
11	3/22/2012	6	
12	3/22/2012	6	
13	3/22/2012	6	
14	3/22/2012	4	
15	3/22/2012	5	
16	3/22/2012	5	
17	3/22/2012	6	
18	3/22/2012	6	
19	3/22/2012	4	
20	3/22/2012	4	
21	3/22/2012	5	
22	3/22/2012	5	
23	4/20/2012	7	
24	4/20/2012	6	
25	4/20/2012	6	
26	5/1/2012	7	
27	5/31/2012	4	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Exposure Rate Measurements

Page 2

Rdg #	Date	Exposure Rate (μ R/hr)	Comments
28	5/31/2012	5	
29	5/31/2012	4	
30	5/31/2012	4	
31	5/31/2012	4	
32	5/31/2012	4	
33	5/31/2012	6	
34	5/31/2012	4	
35	5/31/2012	4	
36	5/31/2012	4	
37	5/31/2012	4	
38	5/31/2012	5	
39	5/31/2012	5	
40	5/31/2012	5	
41	5/31/2012	4	
42	5/31/2012	4	
43	5/31/2012	4	
44	5/31/2012	4	
45	5/31/2012	4	
46	5/31/2012	4	

Exposure Rate Min: 4.00
Summary (μ R/hr) Avg: 4.98
 Max: 7.00
 St Dev: 1.02



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02332

Page 1 of 1

Project Name Radiological Site Survey		PO Number N/A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section		
Project Location HUNTERS POINT		Project Number 4044-0002		LABORATORY ID				
Sampler Name RAY ROBERSON		Airbill Number N/A						
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592						
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0010-F001-01	3/22/2012	1400	1		S1			
02NPR-S0010-F002-01	3/22/2012	1405	1		S1			
02NPR-S0010-F003-01	3/22/2012	1410	1		S1			
02NPR-S0010-F004-01	3/22/2012	1415	1		S1			
02NPR-S0010-F005-01	3/22/2012	1420	1		S1			
02NPR-S0010-F006-01	3/22/2012	1425	1		S1			
02NPR-S0010-F007-01	3/22/2012	1430	1		S1			
02NPR-S0010-F008-01	3/22/2012	1435	1		S1	DUP		
02NPR-S0010-F009-01	3/22/2012	1440	1		S1			
02NPR-S0010-F010-01	3/22/2012	1445	1		S1			
02NPR-S0010-F011-01	3/22/2012	1450	1		S1			
02NPR-S0010-F012-01	3/22/2012	1455	1		S1			

Relinquished by: (signature) Company		Date 3-22-12	Received by: (signature) Company	
Relinquished by: (signature) Company		Time 15:56	Received by: (signature) Company	
Relinquished by: (signature) Company		Date	Received by: (signature) Company	
Relinquished by: (signature) Company		Time	Received by: (signature) Company	
Relinquished by: (signature) Company		Date	Received by: (signature) Company	
Relinquished by: (signature) Company		Time	Received by: (signature) Company	

LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS	
COMPOSITE DESCRIPTION		NORTH RIVER FES	
SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)		50-10	
TEMPERATURE, SAMPLE CONDITION, COOLER SEAL		BASES 1-2	
		SYSTEMATIC 3-22	



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02333

Project Name Radiological Site Survey		PO Number N/A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD. LABORATORY ID		Project Information Section			
Project Location HUNTERS POINT		Project Number 4044-0002							
Sampler Name RAY ROBERSON		Airbill Number N/A							
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592							
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0010-F013-01	3/22/2012	1500	1		S1	<input checked="" type="checkbox"/>			
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02NPR-S0010-F021-01	3/22/2012	1540	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0010-F022-01	3/22/2012	1545	1		S1	<input checked="" type="checkbox"/>			

Relinquished by: (signature)		Date		Received by: (signature)		LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS	
Company ALS		Time 15:50		Company C.T.					
Relinquished by: (signature)		Date		Received by: (signature)		(COMPOSITE DESCRIPTION)			
Company		Time		Company					
Relinquished by: (signature)		Date		Received by: (signature)		SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)			
Company		Time		Company		TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:			



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02384

Page 1 of 1

Project Name Radiological Site Survey		PO Number N/A		G S A L M R P M 9 H A 0 A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section	
Project Location HUNTERS POINT		Project Number 4044-0002		A S P E C		LABORATORY ID			
Sampler Name JOE CUNNINGHAM		Airbill Number N/A							
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592							
SAMPLE ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0001-F023-01	4/20/2012	1040	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0001-F024-01	4/20/2012	1045	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0001-F025-01	4/20/2012	1050	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0001-F026-01	4/20/2012	1055	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0007-F023-01	4/20/2012	1110	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0007-F024-01	4/20/2012	1115	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0010-F023-01	4/20/2012	1125	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0010-F024-01	4/20/2012	1130	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0010-F025-01	4/20/2012	1135	1		S1	<input checked="" type="checkbox"/>			

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Company		Time 10:17	Company
Relinquished by: (signature)		Time 1418	Received by: (signature)
Company		Date	Company
Relinquished by: (signature)		Time	Received by: (signature)
Company		Date	Company
Relinquished by: (signature)		Time	Received by: (signature)
Company		Date	Company

LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS	
COMPOSITE DESCRIPTION		NORTH FACE BFS	
SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)		SU-1	
TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:		CHARACTERIZATION 03-26	
		SU-7	
		CHARACTERIZATION 03-24	
		SU-10	
		CHARACTERIZATION 03-25	



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02397

Project Name Radiological Site Survey	PO Number N/A	LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section								
Project Location HUNTERS POINT	Project Number 4044-0002	LABORATORY ID										
Sampler Name Lisa Bienkowski	Airbill Number N/A	LABORATORY ID										
Project Chemist LISA BIENKOWSKI	Project Chemist Phone 949-756-7592	LABORATORY ID										
SAMPLE ID	DATE	TIME	CONTAINERS	LEVEL	TYPE	T A T	G A M A S P E C	S R 9 0	A L P H A	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0001-F027-01	5/1/2012	1530			S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
02NPR-S0008-F030-01	5/1/2012	1520			S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
02NPR-S0008-F031-01	5/1/2012	1525			S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
02NPR-S0010-F026-01	5/1/2012	1515			S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			

Relinquished by: (signature) [Signature]	Date 05-01-12	Received by: (signature) [Signature]
Company ASPS	Time 1610	Company CJ
Relinquished by: (signature)	Date	Received by: (signature)
Company	Time	Company
Relinquished by: (signature)	Date	Received by: (signature)
Company	Time	Company

LABORATORY INSTRUCTIONS/COMMENTS	LABORATORY COMMENTS
COMPOSITE DESCRIPTION	LABORATORY COMMENTS
SAMPLE CONDITION (TEMPERATURE, HUMIDITY, SAMPLE CONDITION, etc.)	LABORATORY COMMENTS



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02451

Project Name Radiological Site Survey		PO Number N/A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section	
Project Location HUNTERS POINT		Project Number 4044-0002		LABORATORY ID			
Sampler Name R. Robinson		Airbill Number N/A					
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592					
SAMPLE ID	DATE	TIME	Containers	LEVEL	TYPE	COMMENTS	SAMPLE ID
02NPR-S0010-F027-01	5/31/2012	1355	1		S1		
02NPR-S0010-F028-01	5/31/2012	1400	1		S1		
02NPR-S0010-F029-01	5/31/2012	1405	1		S1		
02NPR-S0010-F030-01	5/31/2012	1410	1		S1		
02NPR-S0010-F031-01	5/31/2012	1415	1		S1		
02NPR-S0010-F032-01	5/31/2012	1420	1		S1		
02NPR-S0010-F033-01	5/31/2012	1425	1		S1		
02NPR-S0010-F034-01	5/31/2012	1430	1		S1	DUP	
02NPR-S0010-F035-01	5/31/2012	1455	1		S1		
02NPR-S0010-F036-01	5/31/2012	1500	1		S1		
02NPR-S0010-F037-01	5/31/2012	1505	1		S1		
02NPR-S0010-F038-01	5/31/2012	1510	1		S1		

Relinquished by: (signature) Company RSR	Date 5-31-12	Received by: (signature) Company C&T
Relinquished by: (signature) Company	Time 16:40	Received by: (signature) Company
Relinquished by: (signature) Company	Date	Received by: (signature) Company
Relinquished by: (signature) Company	Time	Received by: (signature) Company

LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS NORTH FIELD SU-10 SYSTEMATIC 27-H6
COMPOSITE DESCRIPTION		
SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY) TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:		



TETRA TECH EC, INC.
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San Diego, CA 92101

Chain-of-Custody Record

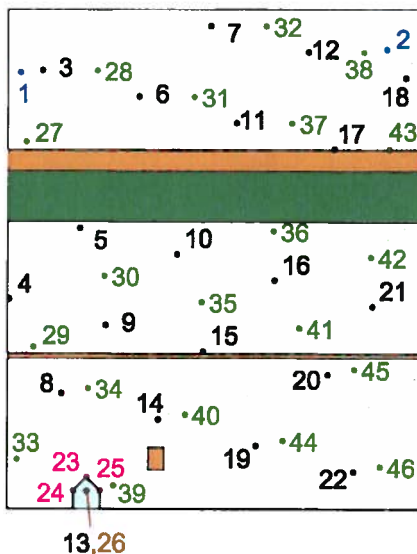
BFS 02452

Project Name Radiological Site Survey		PO Number N/A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section			
Project Location HUNTERS POINT		Project Number 4044-0002		LABORATORY ID					
Sampler Name R. Roberson		Airbill Number N/A							
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592							
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T F F	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0010-F039-01	5/31/2012	1515	1		S1	<input checked="" type="checkbox"/>			
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02NPR-S0010-F043-01	5/31/2012	1535	1		S1	<input checked="" type="checkbox"/>			
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02NPR-S0010-F045-01	5/31/2012	1545	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0010-F046-01	5/31/2012	1550	1		S1	<input checked="" type="checkbox"/>			

Relinquished by: (signature) Company RSR		Date 5-31-12	Received by: (signature) Company	
Relinquished by: (signature) Company		Time 10:40	Received by: (signature) Company	
Relinquished by: (signature) Company		Date	Received by: (signature) Company	
Relinquished by: (signature) Company		Time	Received by: (signature) Company	
Relinquished by: (signature) Company		Date	Received by: (signature) Company	
Relinquished by: (signature) Company		Time	Received by: (signature) Company	

LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS	
COMPOSITE DESCRIPTION			
SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY) TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:			

P:\CTO-02 CAD FILES (RAD EMAC)\DWG FILES\B_WORK AREA 32 TSP\CT02_WA-32_SURVEY UNITS.DWG
 PLOT/UPDATE: MAY 30 2012 15:18:47



SU-10

CLASS 1

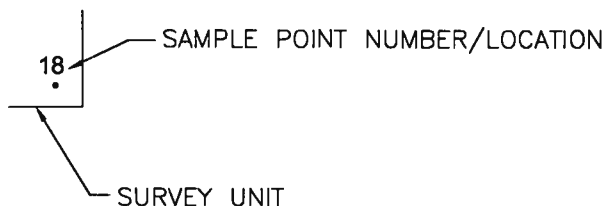
793.91 m² (8545.63 ft²)

LEGEND:

- 1 BIASD 1-2
- 3 SYSTEMATIC 1 3-22
- 23 CHARACTERIZATION 23-25
- 26 POST-REMEDATION 26
- 32 SYSTEMATIC 2 27-46

△△ AREAS PREVIOUSLY REMEDIATED

- ROCK
- CONCRETE



RECORD COPY

SCALE 1:40

HUNTERS POINT SHIPYARD
SAN FRANCISCO, CA
 P.O. BOX 884836
 SAN FRANCISCO, CA 94188

NORTH PIER WA-32
SURVEY UNIT 10



TETRA TECH EC, INC
 1230 COLUMBIA STREET, SUITE 750
 SAN DIEGO, CA 92101
 TEL: (619) 234-8690 FAX: (619) 234-8591

Chiu, George

From: Chiu, George
Sent: Wednesday, July 11, 2012 4:22 PM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - North Pier Survey Unit 10
Attachments: 02NPR-S0010 027 to 046 Off-Site Gamma.pdf; 02NPR-S0010 Pu and Sr.pdf

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the off-site gamma spec, strontium, and plutonium results for the systematic samples from North Pier Survey Unit 10.

George Chiu | Health Physicist
Office: 415.216.2745 | Cell: 714.270.4009
george.chiu@tetrattech.com

Radiological Survey & Remedial Services
100 Washington Street Suite 200 | Reno, NV 89503
www.radsvcs.com

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Think Green - Not every email needs to be printed.

From: Chiu, George
Sent: Wednesday, June 06, 2012 11:44 AM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - North Pier Survey Unit 10

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the on-site systematic sampling results from North Pier Survey Unit 10. Samples 33, 33DUP, 36, and 39 were recounted for a longer duration at the direction of the laboratory manager.

According to the TSP for North Pier, 100% of the final systematic will be analyzed by gamma spectroscopy at a DoD ELAP approved laboratory. Additionally, 10% of the final systematic will be analyzed for total strontium and Pu-239.

George Chiu | Health Physicist
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george.chiu@tetrattech.com

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From: Chiu, George

Sent: Friday, May 11, 2012 9:24 AM

To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)

Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan

Subject: HPS Data - North Pier Survey Unit 10

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the post-remediation sampling results from North Pier Survey Unit 10. Sample 26 was recounted for a longer duration at the direction of the laboratory manager.

We will proceed with the systematic sampling of this survey unit.

George Chiu | Health Physicist

Office: 415.216.2745 | Cell: 714.270.4009

george.chiu@tetrattech.com

Radiological Survey & Remedial Services

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From: Chiu, George

Sent: Thursday, April 26, 2012 4:52 PM

To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)

Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan

Subject: HPS Data - North Pier Survey Unit 10

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review is the total strontium result for the sample with cesium-137 activity above the release criterion from North Pier Survey Unit 10.

George Chiu | Health Physicist

Office: 415.216.2745 | Cell: 714.270.4009

george.chiu@tetrattech.com

Radiological Survey & Remedial Services

100 Washington Street Suite 200 | Reno, NV 89503

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Think Green - Not every email needs to be printed.

From: Chiu, George

Sent: Thursday, April 26, 2012 12:42 PM

To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)

Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan

Subject: HPS Data - North Pier Survey Unit 10

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the characterization sampling results from North Pier Survey Unit 10.

We will proceed with remediation followed by post-remediation sampling.

George Chiu | Health Physicist

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george.chiu@tetrattech.com

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From: Chiu, George

Sent: Tuesday, April 03, 2012 12:57 PM

To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)

Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan

Subject: HPS Data - North Pier Survey Unit 10

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the on-site bias and systematic sampling results from North Pier Survey Unit 10. Also attached are the gamma scans, statics, and exposure rate measurements.

We will proceed with characterization/remediation around sample point 13 (0.1385 pCi/g) due to cesium-137 activity.

George Chiu | Health Physicist

Office: 415.216.2745 | Cell: 714.270.4009

george.chiu@tetrattech.com

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100 Washington Street Suite 200 | Reno, NV 89503

www.radsvcs.com

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TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: March 22, 2012	RAD EMAC – CTO 002
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Overview

The HPNS Team continued field activities for the North Pier and Work Areas #32, #34, and #35. Details of the work activities performed are provided in the sections below.

North Pier

- The HPNS Team performed Class 1 survey activities for Survey Unit 10. A total of 2 biased and 20 systematic gamma static measurements were logged with a maximum measurement of 6,504 cpm. In addition, 22 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The RSOR provided the HPNS Team with survey results for wooden railroad ties detailed in Survey Nos. HPS-A-NPR-029 and HPS-A-NPR-030. Because no activity above the release criteria was identified, the 72 items were released for transfer to the recycling stockpiles.
- The HPNS Team issued drawings to identify locations for biased and systematic sample collection in Class 1 Survey Units 9 and 10.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

- A total of 18 systematic samples were collected from Trench Unit No. 242 by the HPNS Team and submitted to the on-site laboratory for analysis.
- Backfill activities were initiated in Trench Unit No. 237 by the HPNS Team.
- Backfill activities were completed in Trench Unit No. 239 by the HPNS Team.
- A variety of housekeeping activities were performed throughout Parcel C by the HPNS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report



TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: March 22, 2012

RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

- The HPNS Team performed the following RSY4 processing activities:
 - A total of three truckloads of material were received for processing.
 - ES Unit 0660 was staged in the stockpile area pending receipt of the off-site analytical results.

On-Site and Off-Site Laboratories

- On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:
 - Soil samples received for gamma spectroscopy analysis: 57
 - Swipe samples received for Protean counts: 52
 - Air samples received: 8
 - Samples analyzed by gamma spectroscopy: 64
 - Gamma spectroscopy samples recounted: 12
 - Protean swipe samples counted: 36
 - Protean air samples counted: 8
- A total of 266 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.
- A total of 81 samples were sent to TestAmerica St. Louis for analysis.

Basewide Support

- Radiological support was provided to CKY by the HPNS Team during maintenance and landscaping activities in Parcel E-2.
- Radiological support was provided to Shaw Group for equipment surveys.
- Four outgoing materials and equipment surveys were performed by the HPNS Team.



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: March 22, 2012

RMAC – CTO 07

Overview

The HPNS Team continued field activities the Building 508 Site, Shacks 79 and 80, the 500 Series Area, and Work Area #36. Details of the activities performed are provided below.

Building 508 Site

Towed array gamma scan surveys were completed for Class 1 Survey Unit 1.

Shacks 79 and 80

The HPNS Team issued record drawings to identify locations for the post-remediation samples collected from Class 1 Survey Unit 1.

500 Series Area

The HPNS Team performed towed array gamma scan surveys over the H Street asphalt covering Class 1 Survey Unit 11.

The HPNS Team performed Class 1 survey activities as follows:

Survey Unit 1 !A total of four characterization gamma static measurements were logged with a maximum measurement of 4,701 cpm. In addition, four soil samples were collected and submitted to the on-site laboratory for analysis.

Survey Unit 18 !A total of two characterization gamma static measurements were logged with a maximum measurement of 7,346 cpm. In addition, two soil samples were collected and submitted to the on-site laboratory for analysis.

Survey Unit 19 !A total of eleven characterization gamma static measurements were logged with a maximum measurement of 6,709 cpm. In addition, eleven soil samples were collected and submitted to the on-site laboratory for analysis.

The RSO is in the process of reviewing the survey data for Survey Units 1, 18, and 19.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

Internal Draft Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: April 20, 2012	RAD EMAC – CTO 002
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Overview

The HPNS Team continued field activities for the North Pier and Work Areas #32 and #34. Details of the work activities performed are provided in the sections below.

North Pier

The HPNS Team performed Class 1 survey activities as follows:

Survey Unit 1 !A total of four characterization gamma static measurements were logged with a maximum measurement of 7,840 cpm. In addition, four soil samples were collected and submitted to the on-site laboratory for analysis.

Survey Unit 7 !A total of two characterization gamma static measurements were logged with a maximum measurement of 6,087 cpm. In addition, two soil samples were collected and submitted to the on-site laboratory for analysis.

Survey Unit 8 !A total of seven characterization gamma static measurements were logged with a maximum measurement of 6,911 cpm. In addition, seven soil samples were collected and submitted to the on-site laboratory for analysis.

Survey Unit 10 !A total of three characterization gamma static measurements were logged with a maximum measurement of 6,691 cpm. In addition, three soil samples were collected and submitted to the on-site laboratory for analysis.

The RSO is in the process of reviewing the survey data for Survey Units 1, 7, 8, and 10.

The HPNS Team issued drawings to identify locations for characterization sample collection in Class 1 Survey Unit 8.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

The HPNS Team excavated approximately 156 cubic yards of soil from Work Area #32 and transferred the material to RSY4 for processing. Excavation activities were performed for the following trench segments:

- 02-C32-00-1D 45 linear feet completed
- 02-C32-00-1E 6 linear feet completed
- 02-C32-00-1F 44 linear feet completed
- 02-C32-00-1J 12 linear feet completed

- 02-C32-00-1K 15 linear feet completed
- 02-C32-00-8D 62 linear feet completed
- 02-C32-00-8H 50 linear feet completed

A total of 122 linear feet of trench (including excavated soil, manholes, and pipes) identified on the design drawings and 112 linear feet not identified on the design drawings were completed by the HPNS Team.

Manholes MH946, MH1334, MH1335 and MH1336 along and pipes excavated from trench segments 02-C32-00-1D, -1E, -1F, -1J, -1K, -8D, and -8H were placed on plastic pending further activities.

The HPNS Team investigated the entire trench segment 02-C32-00-1F for the presence of pipe. Although depicted on the design drawing, no pipe was found during this investigation.

A total of two sediment samples were collected from excavated Manholes MH946 (02-PCMH946-064-01) and MH1336 (02-PCMH1336-063-01) by the HPNS Team and submitted to the on-site laboratory for analysis.

The RSOR provided the HPNS Team with survey results for the excavated manholes and pipe sections detailed in Survey Nos. HPS-PCPIPE-041312-051, HPS-PCPIPE-041312-052, and HPS-PCPIPE-041612-053. Because no activity above the release criteria was identified, these 17 manholes and 11 pipe sections were released for transfer to the recycling stockpiles near Building 411.

Metal rail track encountered during Work Area #32 trench excavations was sized and staged for transfer to the recycling bins near Building 411.

A variety of housekeeping activities were performed throughout Parcel C by the HPNS Team including street sweeping.

Issues/Items Pending Action

Internal Draft Radiological Removal Action Completion Report



TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: April 20, 2012

RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

The HPNS Team performed towed array survey activities for ES Units 0686 and 0687 at RSY3.

The HPNS Team performed the following RSY4 processing activities:

A total of 13 truckloads of material were received for processing.

Towed array survey activities were performed for ES Units 0645, 0678, 0681, 0683, 0692, and 0693.

ES Units 0659 and 0674 were staged in the stockpile area pending receipt of the off-site analytical results.

Began transfer of ES Unit 0675 to the stockpile area.

The HPNS Team continued radiological monitoring and control activities for the RSYs including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring, as appropriate.

On-Site and Off-Site Laboratories

On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:

Soil samples received for gamma spectroscopy analysis: 36

Swipe samples received for Protean counts: 128

Air samples received: 10

Samples analyzed by gamma spectroscopy: 25

Gamma spectroscopy samples recounted: 5

Protean swipe samples counted: 40

Protean air samples counted: 10

A total of 188 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: April 20, 2012

RMAC – CTO 07

Overview

The HPNS Team continued field activities for Shacks 79 and 80, the 500 Series Area, and Work Area #36. Details of the activities performed are provided in the sections below.

Shacks 79 and 80

The HPNS Team performed Class 1 survey activities for Survey Unit 1. A total of two systematic gamma static measurements were logged with a maximum measurement of 5,807 cpm. In addition, two soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

500 Series Area

The HPNS Team exposed asphalt and continued soil grading and debris removal in preparation for towed array surveys in Class 2 Survey Unit 23.

Asphalt covering Survey Unit 23 (near Building 505) was removed, scanned, and staged within the Class 2 survey boundaries; no elevated readings were identified during the scanning activities.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

Internal Draft Radiological Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: May 1, 2012

RAD EMAC – CTO 002

Overview

The HPNS Team continued field activities for the North Pier and Work Areas #31, #32, and #34. Details of the work activities performed are provided in the sections below.

North Pier

The HPNS Team performed Class 1 survey activities as follows:

Survey Unit 1 !A post-remediation gamma static measurement was logged at 4,909 cpm and one soil sample was collected and submitted to the on-site laboratory for analysis.

Survey Unit 8 !A total of two post-remediation gamma static measurements were logged with a maximum measurement of 7,183 cpm. In addition, two soil samples were collected and submitted to the on-site laboratory for analysis.

Survey Unit 10 !A post-remediation gamma static measurement was logged at 8,245 cpm and one soil sample was collected and submitted to the on-site laboratory for analysis.

Survey Unit 11 !A total of three characterization gamma static measurements were logged with a maximum measurement of 5,612 cpm. In addition, three soil samples were collected and submitted to the on-site laboratory for analysis.

The RSO is in the process of reviewing the survey data for Survey Units 1, 8, 10, and 11.

The HPNS Team provided the RASO with on-site analytical results for the characterization samples collected from Class1 Survey Unit 7. Because no activity above the release criteria was identified, remediation followed by post-remediation sample collection will be performed.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

Radiologically surveyed and released excavated manholes (Survey Nos. HPS-PCPIPE-121211-040 and HPS-PCPIPE-041612-053) were transferred to stockpiles near Building 411 pending off-site disposal or recycling.

Backfill activities were initiated for Trench Unit No. 236 by the HPNS Team.

Issues/Items Pending Action

Internal Draft Radiological Removal Action Completion Report



TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: May 01, 2012

RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

The HPNS Team received a total of six truckloads of material at RSY3 for processing.

The HPNS Team performed the following RSY4 processing activities:

A total of 11 truckloads of material were received for processing.

Issued drawing to identify biased and systematic sample collection locations for ES Unit 0685.

A total of 5 biased and 18 systematic soil samples were collected from ES Unit 0695 and submitted to the on-site laboratory for analysis.

The HPNS Team continued radiological monitoring and control activities for the RSYs including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring, as appropriate.

The HPNS Team provided the RASO with the following:

On-site analytical data for ES Unit 0678 and a request for concurrence to stage the material pending receipt of the off-site analytical results prior to transferring to the DON non-LLRW contactor for off-site disposal at a CERCLA landfill.

On-site analytical data for ES Units 0683 and 0687 along with requests for concurrence to stage the materials pending receipt of the off-site analytical results.

Basewide Support

Radiological support was provided to CKY by the HPNS Team during landscaping activities at Parcel E-2.

On-Site and Off-Site Laboratories

On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:

Soil samples received for gamma spectroscopy analysis: 30

Swipe samples received for Protean counts: 152

Air samples received: 13

Samples analyzed by gamma spectroscopy: 87

Gamma spectroscopy samples recounted: 8

Protean swipe samples counted: 23

Protean air samples counted: 13

A total of 323 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.

A total of 119 samples were sent to TestAmerica St. Louis for analysis.



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: May 1, 2012

RMAC – CTO 07

Overview

The HPNS Team continued field activities for the Building 707 Triangle, the 500 Series Area, and Work Areas #21 and #36. Details of the activities performed are provided below.

Building 707 Triangle

A total of 49 cubic yards of soil were remediated from Class 1 Survey Units 21 and 22 by the HPNS Team and placed in LLRW bins AWIU000261, ERRU000145, and GFLU001030T1 for off-site disposal.

The HPNS Team performed Class 1 survey activities as follows:

Asphalt Grid A7 !A total of 550 alpha/beta scan readings were logged. The preliminary data indicates the presence of beta activity above the release limit in one scan reading logged at 1,100 dpm/100 cm².

Survey Unit 22 !A total of four post-remediation gamma static measurements were logged with maximum measurements of 194 cpm (FIDLER) and 5,034 cpm. In addition, two soil samples were collected and submitted to the off-site laboratory for total strontium analysis.

The RSO is in the process of reviewing the survey data for Asphalt Grid A7 and Survey Unit 22.

500 Series Area

The HPNS Team provided the RASO with on-site analytical results for the characterization samples collected from Class 1 Survey Units 13, 16, and 18. Because no activity above the release criteria was identified, remediation followed by post-remediation sample collection activities will be performed.

The HPNS Team provided the RASO with on-site analytical results for the biased and systematic samples collected from Class 1 Survey Unit 14. Characterization and remediation will be continued due to the presence of ¹³⁷Cs contamination as follows:

- Sample Point 7 (07500SA-S0014-F007-01) with ¹³⁷Cs at 0.1183 pCi/g
- Sample Point 17 (07500SA-S0014-F017-01) with ¹³⁷Cs at 0.2425 pCi/g
- Sample Point 37 (07500SA-S0014-F037-01) with ¹³⁷Cs at 0.3768 pCi/g

The HPNS Team provided the RASO with on-site analytical results for the additional characterization samples collected from Class 1 Survey Units 19 and 21. Because no activity above the release criteria was identified, no further remediation will be performed in these survey units.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

The HPNS Team excavated approximately 204 cubic yards of soil from Work Area #36 and transferred materials to both RSY3 and RSY4 for processing. Excavation activities were performed for the following trench segments:

- 07-E36-00-7F 133 linear feet completed
- 07-E36-00-7G 10 linear feet completed
- 07-E36-00-7H 12 linear feet completed
- 07-E36-00-7I 6 linear feet completed
- 07-E36-00-8Y 25 linear feet completed

A total of 161 linear feet of trench (including excavated soil, a manhole, and pipes) identified on the design drawings and 25 linear feet not identified on the design drawings were completed by the HPNS Team.

Excavated Manhole MH1244 was placed on plastic pending further activities.

The HPNS Team provided the RASO with analytical results for the sediment samples collected from Manholes MH1302 and MH1303. Both manholes will be placed in LLRW bins for off-site disposal due to the presence of ¹³⁷Cs contamination as follows:

- Manhole MH1302 (07-PEMH1302-013-01) with ¹³⁷Cs at 0.2161 pCi/g
- Manhole MH1303 (07-PEMH1303-014-01) with ¹³⁷Cs at 0.1319 pCi/g

The HPNS Team provided the RASO with analytical results for the investigative samples collected from Trench Unit No. 249. Characterization and remediation will be performed due to the presence of ¹³⁷Cs contamination at Sample Point 17 (0.2726 pCi/g).

The HPNS Team provided the RASO with analytical results for the systematic samples collected from Trench Unit No. 248; no activity above the release criteria was identified.

A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

Internal Draft Radiological Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: May 31, 2012

RAD EMAC – CTO 002

Overview

The HPNS Team continued field activities for Buildings 211, 231, and 253; the North Pier; and Work Areas #32 through #35. Details of the work activities performed are provided below.

North Pier

The HPNS Team performed Class 1 survey activities as follows:

Survey Unit 1 A total of 20 systematic gamma static measurements were logged with a maximum measurement of 6,227 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis.

Survey Unit 8 A total of 20 systematic gamma static measurements were logged with a maximum measurement of 6,104 cpm and 20 soil samples were collected and submitted to the on-site laboratory for analysis.

Survey Unit 10 A total of 20 systematic gamma static measurements were logged with a maximum measurement of 6,110 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis.

Survey Unit 11 A total of 20 systematic gamma static measurements were logged with a maximum measurement of 6,599 cpm and 20 soil samples were collected and submitted to the on-site laboratory for analysis.

The RSO is in the process of reviewing the survey data for Survey Units 1, 8, 10, and 11.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

A total of 18 systematic samples were collected from Trench Unit No. 304 (associated with the North Pier) by the HPNS Team and submitted to the on-site laboratory for analysis.

Backfill activities were continued for Trench Unit No. 238 (associated with Buildings 211, 231, and 253) by the HPNS Team.

The HPNS Team and the RASO concurred on backfilling of Trench Unit No. 242.

The HPNS Team issued an updated Parcel C Trench Survey Unit Key Plan and Figures 1-1/3-1 for inclusion in the Internal Draft SUPR for Trench Unit No. 302.

Site restoration activities were performed by the HPNS Team over backfilled trench units in Work Area #33.

Issues/Items Pending Action

Internal Draft Radiological Removal Action Completion Report



TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: May 31, 2012

RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

The HPNS Team received a total of 13 truckloads of material at RSY3 for processing.

The HPNS Team performed the following RSY4 processing activities:

A total of 13 truckloads of material were received for processing.

Began transfer of ES Unit 0700 to the stockpile area.

The HPNS Team provided the RASO with the off-site laboratory analytical results for ES Unit 0686 and a request for concurrence to use the materials as trench backfill.

The HPNS Team continued radiological monitoring and control activities for the RSYs including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring, as appropriate.

After evaluating the data, the RASO concurred with the following:

Transferring ES Unit 0678 to the DON non-LLRW contractor for off-site disposal at a CERCLA landfill.

Reuse of ES Units 0658, 0685, 0687, and 0688 as trench backfill.

Basewide Support

One outgoing materials and equipment survey was performed by the HPNS Team.

On-Site and Off-Site Laboratories

On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:

Soil samples received for gamma spectroscopy analysis: 140

Swipe samples received for Protean counts: 151

Air samples received: 13

Samples analyzed by gamma spectroscopy: 76

Gamma spectroscopy samples recounted: 13

Protean swipe samples counted: 20

Protean air samples counted: 16

A total of 227 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.

A total of 71 samples were sent to TestAmerica St. Louis for analysis.



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: May 31, 2012

RMAC – CTO 07

Overview

The HPNS Team continued field activities for the Building 520 Site, the 500 Series Area, and Work Area #36. Details of the activities performed are provided in the sections below.

Building 520 Site

The HPNS Team provided the RASO with off-site analytical results for the systematic samples collected from Class 1 Survey Unit 4. Characterization and remediation will be performed due to the presence of ⁹⁰Sr contamination at Sample Point 61 (0.365 pCi/g).

500 Series Area

The HPNS Team continued soil grading and debris removal in preparation for upcoming survey activities in Class 2 Survey Units 22 and 23.

The HPNS Team performed Class 1 survey activities for Survey Unit 17. A total of six characterization gamma static measurements were logged with a maximum measurement of 6,340 cpm. In addition, six soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

The HPNS Team provided the RASO with total strontium analytical results for the ¹³⁷Cs contaminated samples collected from Class 1 Survey Unit 17; no further contamination was identified.

The HPNS Team issued drawings to identify locations for characterization sample collection in Class 1 Survey Unit 17.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

The HPNS Team excavated approximately 312 cubic yards of soil from Work Area #36 and transferred the material to both RSY3 and RSY4 for processing. Excavation activities were performed for the following trench segments:

- 07-E36-00-4D 10 linear feet completed
- 07-E36-00-4E 51 linear feet completed
- 07-E36-00-4F 5 linear feet completed
- 07-E36-00-4G 27 linear feet completed
- 07-E36-38-1U 35 linear feet completed

- 07-E36-38-1V 39 linear feet completed
- 07-E36-38-1W 38 linear feet completed
- 07-E36-38-2B 17 linear feet completed
- 07-E36-38-4A 9 linear feet completed
- 07-E36-38-5A 10 linear feet completed

A total of 241 linear feet of trench (including excavated soil, manholes, and pipes) identified on the design drawings was completed by the HPNS Team.

Excavated Manholes MH1257, MH1261, MH1266, and MH1267 were placed on plastic pending further activities.

The HPNS Team investigated trench segment 07-E36-38-1U for the presence of pipe. Although depicted on the design drawing, no pipe was found during the investigation.

A total of four sediment samples were collected from excavated Manholes MH1257, MH1261, MH1266, and MH1267 (MH0016 through MH0019) by the HPNS Team and submitted to the on-site laboratory for analysis.

Survey activities were performed by the HPNS Team for pipe sections removed from trench segment 07-E36-39-1R (Survey No. HPS-PEPIPE-053112-048). During the survey activities, a total of six swipe samples were collected and submitted to the on-site laboratory for analysis.

Survey activities were performed by the HPNS Team on concrete pipe bedding material removed from Trench Unit No. 307 (Survey No. HPS-A-TU307-001). During the survey activities, a total of eight swipe samples were collected and submitted to the on-site laboratory for analysis.

The HPNS Team issued an updated Parcel E Trench Survey Unit Key Plan and Figures 1-1/3-1 for inclusion in the Internal Draft SUPR for Trench Unit No. 301.

A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

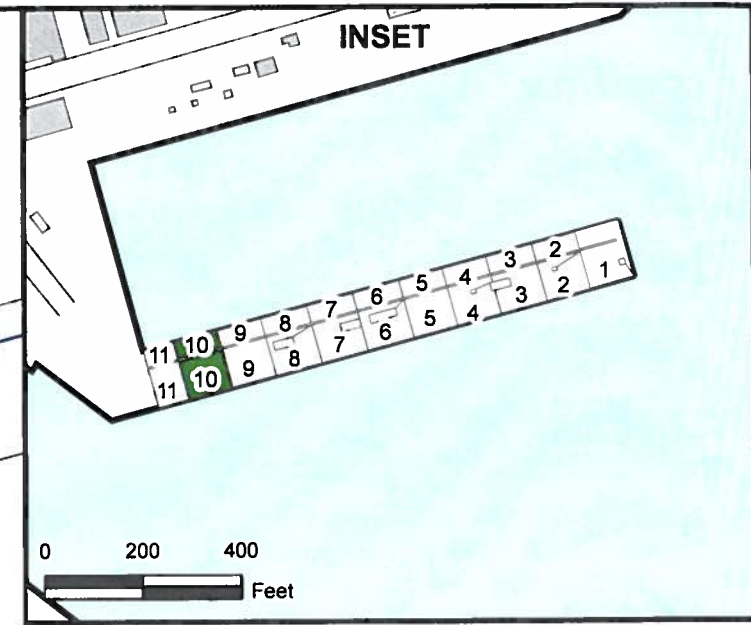
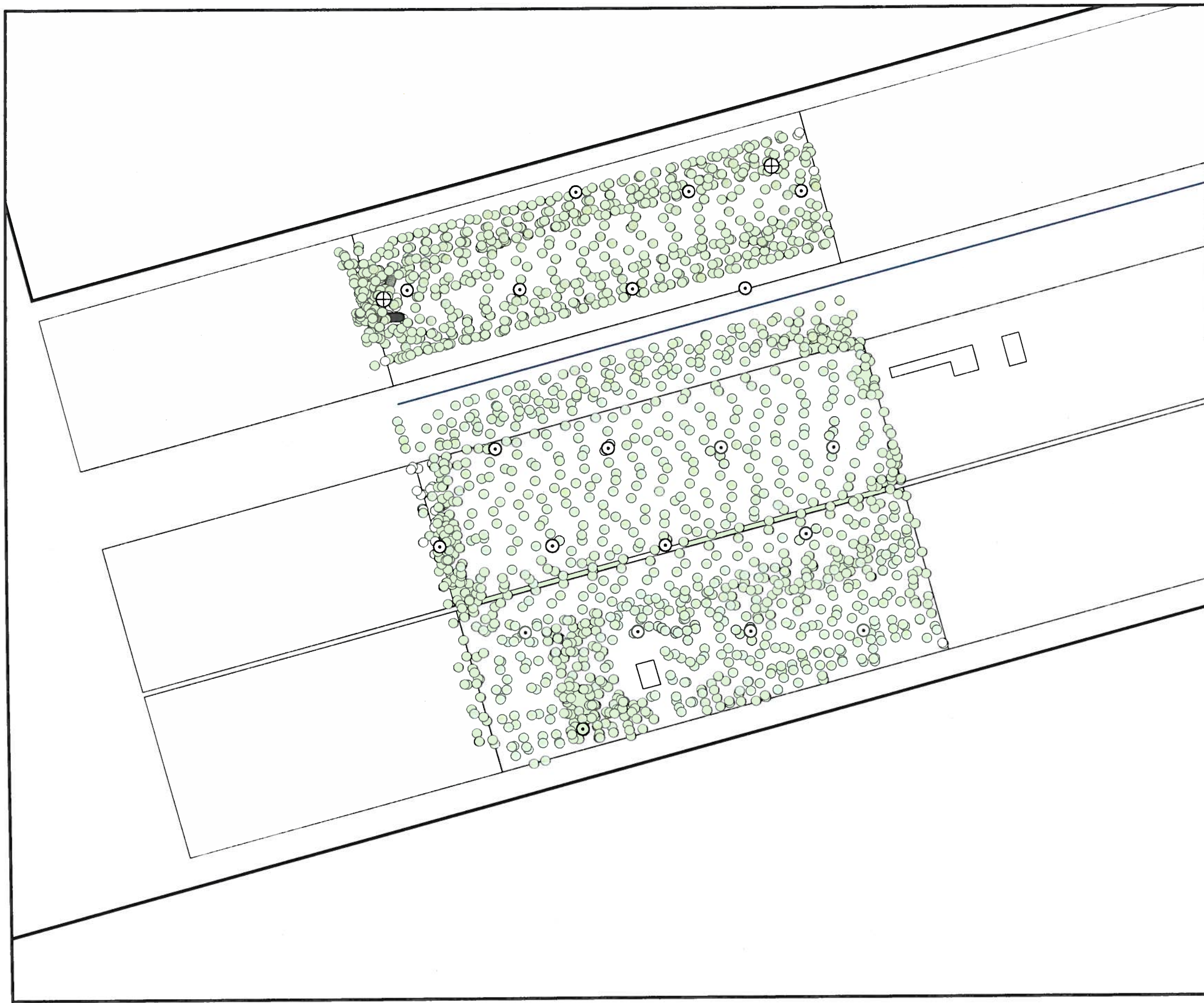
Internal Draft Radiological Removal Action Completion Report

Area	Survey Unit	Sample Point	Sample Type	Sample ID	Date Collected	COC Radiological Technician
NPR	10	53	Systematic	02NPR-S0010-F053-01	31-Oct-12	Jane Taylor
NPR	10	54	Systematic	02NPR-S0010-F054-01	31-Oct-12	Jane Taylor
NPR	10	55	Systematic	02NPR-S0010-F055-01	31-Oct-12	Jane Taylor
NPR	10	56	Systematic	02NPR-S0010-F056-01	31-Oct-12	Jane Taylor
NPR	10	57	Systematic	02NPR-S0010-F057-01	31-Oct-12	Jane Taylor
NPR	10	58	Systematic	02NPR-S0010-F058-01	31-Oct-12	Jane Taylor
NPR	10	59	Systematic	02NPR-S0010-F059-01	31-Oct-12	Jane Taylor
NPR	10	60	Systematic	02NPR-S0010-F060-01	31-Oct-12	Jane Taylor
NPR	10	61	Systematic	02NPR-S0010-F061-01	31-Oct-12	Jane Taylor
NPR	10	62	Systematic	02NPR-S0010-F062-01	31-Oct-12	Jane Taylor
NPR	10	63	Systematic	02NPR-S0010-F063-01	31-Oct-12	Jane Taylor
NPR	10	64	Systematic	02NPR-S0010-F064-01	31-Oct-12	Jane Taylor
NPR	10	65	Systematic	02NPR-S0010-F065-01	31-Oct-12	Jane Taylor
NPR	10	66	Systematic	02NPR-S0010-F066-01	31-Oct-12	Jane Taylor

Highlighted Activities: Ra-226 ≥ 1.633 (On-site) & 1.375 (Off-site) ; Cs-137 ≥ 0.113 ; Bi-214 ≥ 1.485 ; Pb-214 ≥ 1.485 (pCi/g)

On-Site Laboratory (pCi/g)				
K-40	Ra-226	Cs-137	Bi-214	Pb-214
7.347	0.4667	0.01041	0.1955	0.1878
7.815	0.5893	-0.005018	0.2884	0.3019
14.67	1.03	0.01024	0.2767	0.3451
6.409	0.3325	0.001845	0.07646	0.1466
7.624	0.6869	0	0.09832	0.2438
7.358	0.3283	0.009023	0.221	0.2263
8.012	0.4138	0	0.2028	0.2255
7.118	0.6714	0	0	0.217
6.339	0.07396	0	0.1617	0.2319
8.099	0.571	0	0.2031	0.2897
9.678	0.5663	0.01302	0.1993	0.2959
6.338	0.2462	-0.0007313	0.08899	0.08067
4.76	0.2164	-0.003095	0.02739	0.06509
21.04	1.078	0.0003142	0.7597	0.6944

Off-Site Laboratory (pCi/g)				
K-40	Ra-226	Cs-137	Bi-214	Pb-214

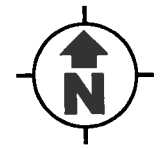


LEGEND

- GAMMA TOTAL, <1 SIGMA
- GAMMA TOTAL, ≥1 AND <2 SIGMA
- GAMMA TOTAL, ≥2 AND <3 SIGMA
- GAMMA TOTAL, ≥3 AND <4 SIGMA
- GAMMA TOTAL, ≥4 AND <5 SIGMA
- GAMMA TOTAL, ≥5 AND <6 SIGMA
- GAMMA TOTAL, ≥6 SIGMA
- BIAS SAMPLE
- SYSTEMATIC SAMPLE
- ROAD
- BUILDING
- SCREENING PAD
- WATER

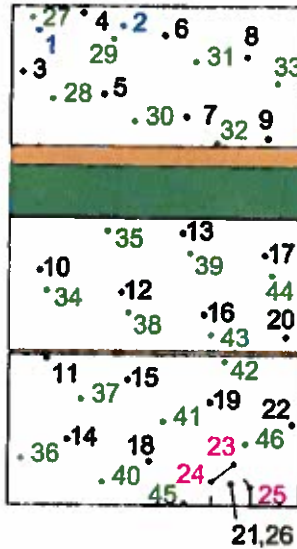


Scale: 1" = 20'



BASE REALIGNMENT AND CLOSURE PROGRAM MANAGEMENT OFFICE WEST SAN DIEGO, CALIFORNIA	
SU-10 North Pier 03/07,20/2012 HUNTERS POINT SHIPYARD SAN FRANCISCO, CALIFORNIA	
REVIEW: 0 AUTHOR: TJS DCN: ECSD-XXXX-XXXX-XXXX FILE NUMBER: NPR-SU10.mxd	 TETRATTECH EC, INC

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PLOT/UPDATE: MAY 30 2012 15:13:48



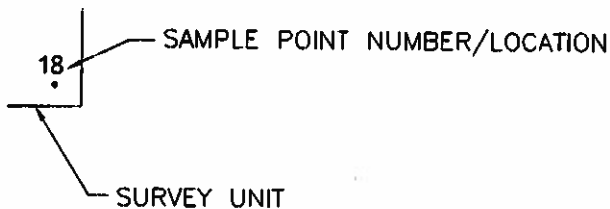
SU-11

CLASS 1

556.60 m² (5991.20 ft²)

LEGEND:

- 1 BIASED 1-2
- 3 SYSTEMATIC 3-22
- 23 CHARACTERIZATION 23-25
- 26 POST-REMEDIATION 26
- 32 SYSTEMATIC 2 27-46
- △ AREAS PREVIOUSLY REMEDIATED
- ROCK
- CONCRETE



RECORD COPY

SCALE 1:40

HUNTERS POINT SHIPYARD
SAN FRANCISCO, CA
P.O. BOX 884836
SAN FRANCISCO, CA 94188

NORTH PIER WA-32
SURVEY UNIT 11



TETRA TECH EC, INC
1230 COLUMBIA STREET, SUITE 750
SAN DIEGO, CA 92101
TEL: (619) 234-8690 FAX: (619) 234-8591



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: NPR Survey Unit: 11 Class: 1 Area: 556.60 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1	3/21/2012 10:52	5590	6386	-796	600-BKGD51B	6765	
2	3/21/2012 10:54	6349	6386	-37	600-BKGD51B	6765	
3	3/21/2012 10:55	5800	6386	-586	600-BKGD51B	6765	
4	3/21/2012 10:57	5087	6386	-1299	600-BKGD51B	6765	
5	3/21/2012 10:59	6262	6386	-124	600-BKGD51B	6765	
6	3/21/2012 11:00	6400	6386	14	600-BKGD51B	6765	
7	3/21/2012 11:02	4947	6386	-1439	600-BKGD51B	6765	
8	3/21/2012 11:03	6692	6386	306	600-BKGD51B	6765	
9	3/21/2012 11:04	5381	6386	-1005	600-BKGD51B	6765	
10	3/21/2012 11:06	5947	6386	-439	600-BKGD51B	6765	
11	3/21/2012 11:07	4422	6386	-1964	600-BKGD51B	6765	
12	3/21/2012 11:09	4635	6386	-1751	600-BKGD51B	6765	
13	3/21/2012 11:10	4344	6386	-2042	600-BKGD51B	6765	
14	3/21/2012 11:12	5376	6386	-1010	600-BKGD51B	6765	
15	3/21/2012 11:14	4183	6386	-2203	600-BKGD51B	6765	
16	3/21/2012 11:16	5147	6386	-1239	600-BKGD51B	6765	
17	3/21/2012 11:17	4440	6386	-1946	600-BKGD51B	6765	
18	3/21/2012 11:19	5118	6386	-1268	600-BKGD51B	6765	
19	3/21/2012 11:21	3923	6386	-2463	600-BKGD51B	6765	
20	3/21/2012 11:22	3622	6386	-2764	600-BKGD51B	6765	
21	3/21/2012 11:24	5907	6386	-479	600-BKGD51B	6765	
22	3/21/2012 11:25	2912	6386	-3474	600-BKGD51B	6765	
23	5/1/2012 15:04	4134	6386	-2252	600-BKGD51B	6765	
24	5/1/2012 15:05	5582	6386	-804	600-BKGD51B	6765	
25	5/1/2012 15:06	5612	6386	-774	600-BKGD51B	6765	
26	5/9/2012 10:02	6493	6066	427	630-BKGD51A	7326	
27	5/31/2012 16:04	5460	6808	-1348	630-BKGD51B	8141	
28	5/31/2012 16:05	4855	6808	-1953	630-BKGD51B	8141	
29	5/31/2012 16:06	6600	6808	-208	630-BKGD51B	8141	
30	5/31/2012 16:07	5132	6808	-1676	630-BKGD51B	8141	
31	5/31/2012 16:09	6063	6808	-745	630-BKGD51B	8141	
32	5/31/2012 16:10	4672	6808	-2136	630-BKGD51B	8141	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: NPR Survey Unit: 11 Class: 1 Area: 556.60 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
33	5/31/2012 16:11	5290	6808	-1518	630-BKGDS1B	8141	
34	5/31/2012 16:12	5165	6808	-1643	630-BKGDS1B	8141	
35	5/31/2012 16:13	4808	6808	-2000	630-BKGDS1B	8141	
36	5/31/2012 16:14	4846	6808	-1962	630-BKGDS1B	8141	
37	5/31/2012 16:15	4091	6808	-2717	630-BKGDS1B	8141	
38	5/31/2012 16:16	4608	6808	-2200	630-BKGDS1B	8141	
39	5/31/2012 16:17	4045	6808	-2763	630-BKGDS1B	8141	
40	5/31/2012 16:18	5118	6808	-1690	630-BKGDS1B	8141	
41	5/31/2012 16:19	3461	6808	-3347	630-BKGDS1B	8141	
42	5/31/2012 16:20	3539	6808	-3269	630-BKGDS1B	8141	
43	5/31/2012 16:21	4933	6808	-1875	630-BKGDS1B	8141	
44	5/31/2012 16:22	4146	6808	-2662	630-BKGDS1B	8141	
45	5/31/2012 16:23	5102	6808	-1706	630-BKGDS1B	8141	
46	5/31/2012 16:25	3249	6808	-3559	630-BKGDS1B	8141	

Net Gamma cpm Min: -3559

Summary Avg: -1573

Max: 427

St Dev: 1008

Readings > 3σ investigation level are highlighted in blue

* Background ID correlates to Instrument reference area background Identification number

Gamma measurements > 3σ investigation level are verified by 2360 beta measurements



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: NPR Survey Unit: 11 Class: 1 Area: 556.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

2350 Identification #: 600

Instrument/Probe Type: 2350-1 / 44-10

Instrument Serial #: 95360

Probe Serial #: 192597

Calibration Due Date: 6/8/2012

Reference Area Background Identification #: 600-BKGDS1B Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	09/08/2011 13:56	6403
2	09/08/2011 13:57	6371
3	09/08/2011 13:58	6445
4	09/08/2011 13:59	6476
5	09/08/2011 13:01	6384
6	09/08/2011 13:04	6441
7	09/08/2011 13:09	6015
8	09/08/2011 13:11	6189
9	09/08/2011 13:13	6336
10	09/08/2011 13:14	6452
11	09/08/2011 13:15	6517
12	09/08/2011 13:16	6495
13	09/08/2011 13:17	6459
14	09/08/2011 13:18	6549
15	09/08/2011 13:19	6418
16	09/08/2011 13:20	6428
17	09/08/2011 13:22	6278
18	09/08/2011 13:32	6226
19	09/08/2011 13:33	6377
20	09/08/2011 13:34	6456

Gamma Mean Background (cpm): 6386

Standard Deviation: 127

Gamma 3σ Investigation
Level (cpm): 6765



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: NPR Survey Unit: 11 Class: 1 Area: 556.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

2350 Identification #: 630

Instrument/Probe Type: 2350-1 / 44-10

Instrument Serial #: 120588

Probe Serial #: 081878

Calibration Due Date: 10/16/2012

Reference Area Background Identification #: 630-8KGD51A Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	05/07/2012 13:53	5960
2	05/07/2012 13:54	6454
3	05/07/2012 13:55	6379
4	05/07/2012 13:56	6341
5	05/07/2012 13:58	6462
6	05/07/2012 13:59	5562
7	05/07/2012 14:00	6147
8	05/07/2012 14:01	6082
9	05/07/2012 14:02	6563
10	05/07/2012 14:04	6738
11	05/07/2012 14:06	5328
12	05/07/2012 14:07	5349
13	05/07/2012 14:09	5317
14	05/07/2012 14:10	6023
15	05/07/2012 14:11	6016
16	05/07/2012 14:12	6229
17	05/07/2012 14:13	6439
18	05/07/2012 14:15	6218
19	05/07/2012 14:18	5862
20	05/07/2012 14:19	5857

Gamma Mean Background (cpm): 6066

Standard Deviation: 420

Gamma 3 σ Investigation
Level (cpm): 7326



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: NPR Survey Unit: 11 Class: 1 Area: 556.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

2350 Identification #: 630

Instrument/Probe Type: 2350-1 / 44-10

Instrument Serial #: 120588

Probe Serial #: 081878

Calibration Due Date: 10/16/2012

Reference Area Background Identification #: 630-BKGDS18 Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	05/23/2012 13:42	6777
2	05/23/2012 13:43	6444
3	05/23/2012 13:44	7288
4	05/23/2012 13:45	7319
5	05/23/2012 13:47	6473
6	05/23/2012 13:48	6801
7	05/23/2012 13:49	7364
8	05/23/2012 13:50	7091
9	05/23/2012 13:51	6567
10	05/23/2012 13:53	5952
11	05/23/2012 13:55	6739
12	05/23/2012 13:56	6778
13	05/23/2012 13:58	6925
14	05/23/2012 13:59	6047
15	05/23/2012 14:00	6022
16	05/23/2012 14:02	7217
17	05/23/2012 14:03	6857
18	05/23/2012 14:05	7209
19	05/23/2012 14:07	7323
20	05/23/2012 14:08	6960

Gamma Mean Background (cpm): 6808

Standard Deviation: 444

Gamma 3σ Investigation
Level (cpm): 8141



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Exposure Rate Measurements

Page 1

Site Area: NPR Survey Unit: 11 Class: 1 Area: 556.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Instrument Model:	Model 19	Reference Area Background Identification #:	636-BKGDS1
Instrument Serial Number:	115870	Reference Area Background Location:	Parcel D-1 Reference
Instrument Calibration Due Date:	10/10/2012	Exposure Rate Background (μR/hr):	5

Rdg #	Date	Exposure Rate (μR/hr)	Comments
1	3/21/2012	6	
2	3/21/2012	7	
3	3/21/2012	6	
4	3/21/2012	6	
5	3/21/2012	5	
6	3/21/2012	7	
7	3/21/2012	7	
8	3/21/2012	7	
9	3/21/2012	6	
10	3/21/2012	7	
11	3/21/2012	5	
12	3/21/2012	6	
13	3/21/2012	6	
14	3/21/2012	5	
15	3/21/2012	5	
16	3/21/2012	5	
17	3/21/2012	5	
18	3/21/2012	5	
19	3/21/2012	4	
20	3/21/2012	5	
21	3/21/2012	5	
22	3/21/2012	4	
23	5/1/2012	4	
24	5/1/2012	5	
25	5/1/2012	5	
26	5/9/2012	6	
27	5/31/2012	5	



TETRATECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Exposure Rate Measurements

Page 2

Rdg #	Date	Exposure Rate (μ R/hr)	Comments
28	5/31/2012	4	
29	5/31/2012	6	
30	5/31/2012	5	
31	5/31/2012	6	
32	5/31/2012	4	
33	5/31/2012	5	
34	5/31/2012	5	
35	5/31/2012	4	
36	5/31/2012	4	
37	5/31/2012	4	
38	5/31/2012	4	
39	5/31/2012	4	
40	5/31/2012	5	
41	5/31/2012	4	
42	5/31/2012	4	
43	5/31/2012	4	
44	5/31/2012	4	
45	5/31/2012	5	
46	5/31/2012	4	

Exposure Rate Min: 4.00
Summary (μ R/hr) Avg: 5.09
 Max: 7.00
 St Dev: 0.98



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02327

Project Name Radiological Site Survey	PO Number N/A	LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section								
Project Location HUNTERS POINT	Project Number 4044-0002	LABORATORY ID										
Sampler Name RAY ROBERTSON	Airbill Number N/A											
Project Chemist LISA BIENKOWSKI	Project Chemist Phone 949-758-7592											
SAMPLE ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	1	1	1	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0011-F001-01	3/21/2012	0830	1		S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
02NPR-S0011-F002-01	3/21/2012	0835	1		S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
02NPR-S0011-F003-01	3/21/2012	0840	1		S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
02NPR-S0011-F004-01	3/21/2012	0845	1		S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
02NPR-S0011-F005-01	3/21/2012	0850	1		S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
02NPR-S0011-F006-01	3/21/2012	0920	1		S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
02NPR-S0011-F007-01	3/21/2012	0925	1		S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
02NPR-S0011-F008-01	3/21/2012	0930	1		S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
02NPR-S0011-F009-01	3/21/2012	0935	1		S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
02NPR-S0011-F010-01	3/21/2012	0940	1		S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
02NPR-S0011-F011-01	3/21/2012	0945	1		S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
02NPR-S0011-F012-01	3/21/2012	0950	1		S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			

Relinquished by: (signature) Company RSR	Date 3-21-12	Received by: (signature) Company C4	LABORATORY INSTRUCTIONS/COMMENTS
Relinquished by: (signature)	Time 1325	Received by: (signature)	COMPOSITE DESCRIPTION
Company	Date	Company	ISAMPLE CONDITION UPON RECEIPT (FOR LABORATORY?)
Relinquished by: (signature)	Time	Received by: (signature)	TEMPERATURE SAMPLE CONDITION COOLER SEAL
Company	Date	Company	
Relinquished by: (signature)	Time	Received by: (signature)	
Company	Date	Company	

SAMPLING COMMENTS
NORTH PIER FSS
SU-11
BASED-1-2
SYSTEMATIC 3-22



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02328

Project Name Radiological Site Survey		PO Number N/A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section		
Project Location HUNTERS POINT		Project Number 4044-0002		LABORATORY ID				
Sampler Name KAY ROGERSON		Airbill Number N/A						
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592						
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0011-F013-01	3/21/2012	0955	1		S1			
02NPR-S0011-F014-01	3/21/2012	1000	1		S1			
02NPR-S0011-F015-01	3/21/2012	1005	1		S1			
02NPR-S0011-F016-01	3/21/2012	1010	1		S1			
02NPR-S0011-F017-01	3/21/2012	1015	1		S1			
02NPR-S0011-F018-01	3/21/2012	1020	1		S1			
02NPR-S0011-F019-01	3/21/2012	1025	1		S1			
02NPR-S0011-F020-01	3/21/2012	1030	1		S1			
02NPR-S0011-F021-01	3/21/2012	1035	1		S1			
02NPR-S0011-F022-01	3/21/2012	1040	1		S1			

Relinquished by: (signature) Company RSKS	Date 3-21-12	Received by: (signature) Company	LABORATORY INSTRUCTIONS/COMMENTS COMPOSITE DESCRIPTION SAMPLE CONDITION/ON RECEIPT (FOR LABORATORY) TEMPERATURE AND SAMPLE CONDITION (COOLER SLIT)	SAMPLING COMMENTS
Relinquished by: (signature) Company	Time 1325	Received by: (signature) Company		
Relinquished by: (signature) Company	Date	Received by: (signature) Company		
Relinquished by: (signature) Company	Time	Received by: (signature) Company		
Relinquished by: (signature) Company	Date	Received by: (signature) Company		



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02396

Project Name Radiological Site Survey		PO Number N/A		G A M A S P E C		S R 9 0 A		A L P H A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section	
Project Location HUNTERS POINT		Project Number 4044-0002		M M A S P E C		S R 9 0 A		A L P H A		LABORATORY ID			
Sampler Name Lisa Robinson		Airbill Number N/A		I A T		S R 9 0 A		A L P H A					
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592		I A T		S R 9 0 A		A L P H A					
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	I A T		S R 9 0 A		COMMENTS		LOCATION	SAMPLE ID
02NPR-S0011-F023-01	5/1/2012	1500	1		S1			<input checked="" type="checkbox"/>					
02NPR-S0011-F024-01	5/1/2012	1505	1		S1			<input checked="" type="checkbox"/>					
02NPR-S0011-F025-01	5/1/2012	1510	1		S1			<input checked="" type="checkbox"/>					

Relinquished by: (signature) [Signature]	Date 05-01-12	Received by: (signature) [Signature]	LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS	
Company RPS	Time 1605	Company CT	COMPOSITE DESCRIPTION		NORTH PLATES SOUTH PLATES CHALICE 2376	
Relinquished by: (signature)	Date	Received by: (signature)	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)			
Company	Time	Company	TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:			
Relinquished by: (signature)	Date	Received by: (signature)				
Company	Time	Company				



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02418

Page 1 of 1

Project Name Radiological Site Survey		PO Number N/A		G A M A S P E C		S R 9 0		A L P H A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section	
Project Location HUNTERS POINT		Project Number 4044-0002								LABORATORY NAME [REDACTED]			
Sampler Name <i>Joe Cunningham</i>		Airbill Number N/A											
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592											
SAMPLE ID	DATE	TIME	COSTALBERS	LEVEL	TYPE	T A T	1	1	1	COMMENTS	LOCATION	SAMPLE ID	
02NPR-S0011-F026-01	5/9/2012	1015	1		S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			[REDACTED]	

Relinquished by: (signature) <i>[Signature]</i>	Date 050912	Received by: (signature) <i>[Signature]</i>	LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS NORTH AREA, BFS 250-111 Post-Remediation 26	
Company RSR5	Time 14:03	Company C&T				
Relinquished by: (signature)	Date	Received by: (signature)	COMPOSITION DESCRIPTION			
Company	Time	Company				
Relinquished by: (signature)	Date	Received by: (signature)	SAMPLING CONDITIONS (FOR LABORATORY)			
Company	Time	Company	TEMPERATURE SAMPLING CONDITION: GOOD/SEAS			



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02453

Project Name Radiological Site Survey	PO Number N/A	LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section							
Project Location HUNTERS POINT	Project Number 4044-0002	LABORATORY ID									
Sampler Name R. Robertson	Airbill Number N/A										
Project Chemist LISA BIENKOWSKI	Project Chemist Phone 949-756-7592										
SAMPLE ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	G A M M A S P E C	S R 9 0 A	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0011-F027-01	5/31/2012	1146	1		S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>			
02NPR-S0011-F028-01	5/31/2012	1145	1		S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>			
02NPR-S0011-F029-01	5/31/2012	1150	1		S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>			
02NPR-S0011-F030-01	5/31/2012	1155	1		S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>			
02NPR-S0011-F031-01	5/31/2012	1235	1		S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>			
02NPR-S0011-F032-01	5/31/2012	1240	1		S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>			
02NPR-S0011-F033-01	5/31/2012	1245	1		S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>			
02NPR-S0011-F034-01	5/31/2012	1250	1		S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>			
02NPR-S0011-F035-01	5/31/2012	1255	1		S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>			
02NPR-S0011-F036-01	5/31/2012	1300	1		S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>			
02NPR-S0011-F037-01	5/31/2012	1305	1		S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>			
02NPR-S0011-F038-01	5/31/2012	1310	1		S1		<input checked="" type="checkbox"/>	<input type="checkbox"/>			

Relinquished by: (signature) Company RSR	Date 5-31-12	Received by: (signature) Company C E T
Relinquished by: (signature)	Time 16:32	Received by: (signature)
Company	Date	Company
Relinquished by: (signature)	Time	Received by: (signature)
Company	Date	Company
Relinquished by: (signature)	Time	Received by: (signature)
Company	Date	Company

LABORATORY INSTRUCTIONS/COMMENTS	SAMPLING COMMENTS Next day BFS 5/31/12 SYSTEMATIC 27-46
COMPOSITE DESCRIPTION	
SAMPLE CONDITION (UPON RECEIPT FOR LABORATORY) TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:	



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02454

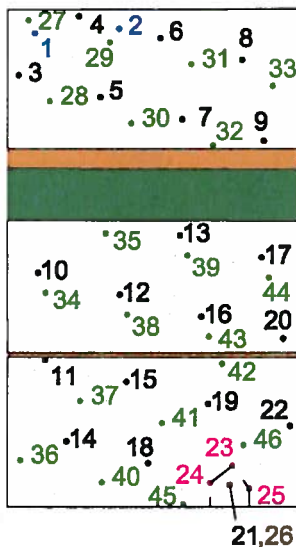
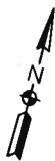
Page 1 of 1

Project Name Radiological Site Survey		PO Number N/A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section			
Project Location HUNTERS POINT		Project Number 4044-0002		LABORATORY ID					
Sampler Name <i>P. Rebarson</i>		Airbill Number N/A							
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592							
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	TA	COMMENTS	LOCATION	SAMPLE ID
02NPR-S0011-F039-01	5/31/2012	1315	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0011-F040-01	5/31/2012	1320	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0011-F041-01	5/31/2012	1325	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0011-F042-01	5/31/2012	1330	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0011-F043-01	5/31/2012	1335	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0011-F044-01	5/31/2012	1340	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0011-F045-01	5/31/2012	1345	1		S1	<input checked="" type="checkbox"/>			
02NPR-S0011-F046-01	5/31/2012	1350	1		S1	<input checked="" type="checkbox"/>			

Relinquished by: (signature) <i>[Signature]</i>		Date 5-31-12	Received by: (signature) <i>[Signature]</i>	
Company RSRS		Time 16:32	Company CEI	
Relinquished by: (signature)		Date	Received by: (signature)	
Company		Time	Company	
Relinquished by: (signature)		Date	Received by: (signature)	
Company		Time	Company	

LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS	
COMPOSITE DESCRIPTION			
SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)			
TEMPERATURE: SAMPLE CONDITION: COOLER SEALS:			

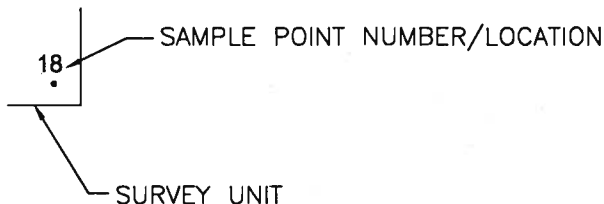
P:\CTO-02 CAD FILES (RAD EMAC)\DWG FILES\B_WORK AREA 32 TSP\CTO2_WA-32_SURVEY UNITS.DWG
 PLOT/UPDATE: MAY 30 2012 15:13:48



SU-11
 CLASS 1
 556.60 m² (5991.20 ft²)

LEGEND:

- 1 BIASED 1-2
- 3 SYSTEMATIC 3-22
- 23 CHARACTERIZATION 23-25
- 26 POST-REMEDiation 26
- 32 SYSTEMATIC 2 27-46
- △ AREAS PREVIOUSLY REMEDIATED
- ROCK
- CONCRETE



RECORD COPY

SCALE 1:40

HUNTERS POINT SHIPYARD
SAN FRANCISCO, CA
 P.O. BOX 884836
 SAN FRANCISCO, CA 94188

NORTH PIER WA-32
SURVEY UNIT 11



TETRA TECH EC, INC
 1230 COLUMBIA STREET, SUITE 750
 SAN DIEGO, CA 92101
 TEL: (619) 234-8690 FAX: (619) 234-8591

Chiu, George

From: Chiu, George
Sent: Wednesday, July 11, 2012 10:18 AM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - North Pier Survey Unit 11
Attachments: 02NPR-S0011 027 to 046 Off-Site Gamma.pdf; 02NPR-S0011 Pu and Sr.pdf

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the off-site gamma spec, strontium, and plutonium results for the systematic samples from North Pier Survey Unit 11.

George Chiu | Health Physicist
Office: 415.216.2745 | Cell: 714.270.4009
george.chiu@tetratech.com

Radiological Survey & Remedial Services
100 Washington Street Suite 200 | Reno, NV 89503
www.radsvcs.com

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Think Green - Not every email needs to be printed.

From: Chiu, George
Sent: Sunday, June 10, 2012 4:54 PM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - North Pier Survey Unit 11

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the on-site systematic sampling results from North Pier Survey Unit 11. Samples 29 and 30 were recounted for a longer duration at the direction of the laboratory manager.

According to the TSP for North Pier, 100% of the final systematic will be analyzed by gamma spectroscopy at a DoD ELAP approved laboratory. Additionally, 10% of the final systematic will be analyzed for total strontium and Pu-239.

George Chiu | Health Physicist
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Radiological Survey & Remedial Services
100 Washington Street Suite 200 | Reno, NV 89503
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Think Green - Not every email needs to be printed.

From: Chiu, George

Sent: Thursday, May 17, 2012 12:50 PM

To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)

Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan

Subject: HPS Data - North Pier Survey Unit 11

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review is the total strontium result for the sample with cesium-137 activity above the release criterion from North Pier Survey Unit 11.

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From: Chiu, George

Sent: Tuesday, May 15, 2012 7:28 PM

To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)

Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan

Subject: HPS Data - North Pier Survey Unit 11

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the post-remediation sampling results from North Pier Survey Unit 11.

We will proceed with the systematic sampling of this survey unit.

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Think Green - Not every email needs to be printed.

From: Chiu, George

Sent: Friday, May 11, 2012 9:24 AM

To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)

Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan

Subject: HPS Data - North Pier Survey Unit 11

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the characterization sampling results from North Pier Survey Unit 11.

We will proceed with remediation followed by post-remediation sampling.

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Think Green - Not every email needs to be printed.

From: Chiu, George

Sent: Sunday, April 29, 2012 7:24 PM

To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)

Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan

Subject: HPS Data - North Pier Survey Unit 11

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the off-site systematic sampling results from North Pier Survey Unit 11.

We will proceed with characterization/remediation around sample point 21 (0.118 pCi/g) due to cesium-137 activity.

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Think Green - Not every email needs to be printed.

From: Chiu, George

Sent: Tuesday, April 03, 2012 12:58 PM

To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)

Cc: Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan

Subject: HPS Data - North Pier Survey Unit 11

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the on-site bias and systematic sampling results from North Pier Survey Unit 11. Sample 10 was recounted for a longer duration at the direction of the laboratory manager. Also attached are the gamma scans, statics, and exposure rate measurements.

According to the TSP for North Pier, 100% of the final systematic will be analyzed by gamma spectroscopy at a DoD ELAP approved laboratory. Additionally, 10% of the final systematic will be analyzed for total strontium and Pu-239.

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TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: March 21, 2012

RAD EMAC – CTO 002

Overview

The HPNS Team continued field activities for the North Pier and Work Areas #32, #33, #34, and #35. Details of the work activities performed are provided in the sections below.

North Pier

Survey activities were performed by the HPNS Team on the aboveground force main concrete bedding debris (Survey No. HPS-A-NPR-031); a total of 36 swipe samples were collected and submitted to the on-site laboratory for analysis.

The HPNS Team performed Class 1 survey activities for Survey Unit 11. A total of 2 biased and 20 systematic gamma static measurements were logged with a maximum measurement of 6,692 cpm. In addition, 22 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

Backfill activities were continued in Trench Unit No. 239 by the HPNS Team.

The HPNS Team issued drawings to identify locations for systematic sample collection in Trench Unit No. 242.

A variety of housekeeping activities were performed throughout Parcel C by the HPNS Team including street sweeping.

Issues/Items Pending Action

Internal Draft Removal Action Completion Report



TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: March 21, 2012

RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

The HPNS Team performed the following RSY4 processing activities:

One truckload of material was received for processing.

Began transfer of ES Unit 0618 to the metal debris reef area.

The HPNS Team continued radiological monitoring and control activities for the RSYs including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring, as appropriate.

On-Site and Off-Site Laboratories

On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:

Soil samples received for gamma spectroscopy analysis: 73

Swipe samples received for Protean counts: 41

Air samples received: 6

Samples analyzed by gamma spectroscopy: 72

Gamma spectroscopy samples recounted: 25

Protean swipe samples counted: 74

Protean air samples counted: 6

A total of 283 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.

Basewide Support

Radiological support was provided to CKY by the HPNS Team during maintenance and landscaping activities in Parcel E-2.

Radiological support was provided to Shaw Group by the HPNS Team during groundwater monitoring activities in Buildings 211/253.

One incoming materials and equipment survey was performed by the HPNS Team.



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: March 21, 2012

RMAC – CTO 07

Overview

The HPNS Team continued field activities for Building 521, the Buildings 507 and 508 Sites, the 500 Series Area, and Work Area #36. Details of the activities performed are provided in the sections below.

Building 507 Site

Towed array gamma scan survey activities over Class 1 Survey Unit 1 were completed by the HPNS Team.

Building 508 Site

The HPNS Team performed soil grading and debris removal in preparation for upcoming towed array surveys.

Building 521

A total of seven drums containing bunker fuel oil and pipe chase materials were scanned and transferred to ITSI for off-site disposal.

500 Series Area

The HPNS Team performed towed array gamma scan surveys over the H Street asphalt covering Class 1 Survey Unit 10.

The HPNS Team performed Class 1 survey activities as follows:

Survey Unit 16 !A total of 14 characterization gamma static measurements were logged with a maximum measurement of 7,789 cpm. In addition, 14 soil samples were collected and submitted to the on-site laboratory for analysis.

Survey Unit 20 !A total of 36 systematic gamma static measurements were logged with a maximum measurement of 6,672 cpm. In addition, 36 soil samples were collected and submitted to the on-site laboratory for analysis.

The RSO is in the process of reviewing the survey data for Survey Units 16 and 20.

The HPNS Team issued drawings to identify locations for characterization sample collection in Class 1 Survey Units 1, 18, and 19.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

An additional control access point was installed on the southern end of H Street by the HPNS Team to facilitate upcoming sewer removal activities.

A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

Internal Draft Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: May 1, 2012	RAD EMAC – CTO 002
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Overview

The HPNS Team continued field activities for the North Pier and Work Areas #31, #32, and #34. Details of the work activities performed are provided in the sections below.

North Pier

The HPNS Team performed Class 1 survey activities as follows:

Survey Unit 1 1A post-remediation gamma static measurement was logged at 4,909 cpm and one soil sample was collected and submitted to the on-site laboratory for analysis.

Survey Unit 8 1A total of two post-remediation gamma static measurements were logged with a maximum measurement of 7,183 cpm. In addition, two soil samples were collected and submitted to the on-site laboratory for analysis.

Survey Unit 10 1A post-remediation gamma static measurement was logged at 8,245 cpm and one soil sample was collected and submitted to the on-site laboratory for analysis.

Survey Unit 11 1A total of three characterization gamma static measurements were logged with a maximum measurement of 5,612 cpm. In addition, three soil samples were collected and submitted to the on-site laboratory for analysis.

The RSO is in the process of reviewing the survey data for Survey Units 1, 8, 10, and 11.

The HPNS Team provided the RASO with on-site analytical results for the characterization samples collected from Class 1 Survey Unit 7. Because no activity above the release criteria was identified, remediation followed by post-remediation sample collection will be performed.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

Radiologically surveyed and released excavated manholes (Survey Nos. HPS-PCPIPE-121211-040 and HPS-PCPIPE-041612-053) were transferred to stockpiles near Building 411 pending off-site disposal or recycling.

Backfill activities were initiated for Trench Unit No. 236 by the HPNS Team.

Issues/Items Pending Action

Internal Draft Radiological Removal Action Completion Report



TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: May 01, 2012

RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

The HPNS Team received a total of six truckloads of material at RSY3 for processing.

The HPNS Team performed the following RSY4 processing activities:

A total of 11 truckloads of material were received for processing.

Issued drawing to identify biased and systematic sample collection locations for ES Unit 0685.

A total of 5 biased and 18 systematic soil samples were collected from ES Unit 0695 and submitted to the on-site laboratory for analysis.

The HPNS Team continued radiological monitoring and control activities for the RSYs including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring, as appropriate.

The HPNS Team provided the RASO with the following:

On-site analytical data for ES Unit 0678 and a request for concurrence to stage the material pending receipt of the off-site analytical results prior to transferring to the DON non-LLRW contactor for off-site disposal at a CERCLA landfill.

On-site analytical data for ES Units 0683 and 0687 along with requests for concurrence to stage the materials pending receipt of the off-site analytical results.

Basewide Support

Radiological support was provided to CKY by the HPNS Team during landscaping activities at Parcel E-2.

On-Site and Off-Site Laboratories

On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:

Soil samples received for gamma spectroscopy analysis: 30

Swipe samples received for Protean counts: 152

Air samples received: 13

Samples analyzed by gamma spectroscopy: 87

Gamma spectroscopy samples recounted: 8

Protean swipe samples counted: 23

Protean air samples counted: 13

A total of 323 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.

A total of 119 samples were sent to TestAmerica St. Louis for analysis.



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel E and Building 500 Series Removal Action

Report Date: May 1, 2012	RMAC – CTO 07
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Overview

The HPNS Team continued field activities for the Building 707 Triangle, the 500 Series Area, and Work Areas #21 and #36. Details of the activities performed are provided below.

Building 707 Triangle

A total of 49 cubic yards of soil were remediated from Class 1 Survey Units 21 and 22 by the HPNS Team and placed in LLRW bins AWIU000261, ERRU000145, and GFLU001030T1 for off-site disposal.

The HPNS Team performed Class 1 survey activities as follows:

Asphalt Grid A7 !A total of 550 alpha/beta scan readings were logged. The preliminary data indicates the presence of beta activity above the release limit in one scan reading logged at 1,100 dpm/100 cm².

Survey Unit 22 !A total of four post-remediation gamma static measurements were logged with maximum measurements of 194 cpm (FIDLER) and 5,034 cpm. In addition, two soil samples were collected and submitted to the off-site laboratory for total strontium analysis.

The RSO is in the process of reviewing the survey data for Asphalt Grid A7 and Survey Unit 22.

500 Series Area

The HPNS Team provided the RASO with on-site analytical results for the characterization samples collected from Class 1 Survey Units 13, 16, and 18. Because no activity above the release criteria was identified, remediation followed by post-remediation sample collection activities will be performed.

The HPNS Team provided the RASO with on-site analytical results for the biased and systematic samples collected from Class 1 Survey Unit 14. Characterization and remediation will be continued due to the presence of ¹³⁷Cs contamination as follows:

- Sample Point 7 (07500SA-S0014-F007-01) with ¹³⁷Cs at 0.1183 pCi/g
- Sample Point 17 (07500SA-S0014-F017-01) with ¹³⁷Cs at 0.2425 pCi/g
- Sample Point 37 (07500SA-S0014-F037-01) with ¹³⁷Cs at 0.3768 pCi/g

The HPNS Team provided the RASO with on-site analytical results for the additional characterization samples collected from Class 1 Survey Units 19 and 21. Because no activity above the release criteria was identified, no further remediation will be performed in these survey units.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

The HPNS Team excavated approximately 204 cubic yards of soil from Work Area #36 and transferred materials to both RSY3 and RSY4 for processing. Excavation activities were performed for the following trench segments:

- 07-E36-00-7F 133 linear feet completed
- 07-E36-00-7G 10 linear feet completed
- 07-E36-00-7H 12 linear feet completed
- 07-E36-00-7I 6 linear feet completed
- 07-E36-00-8Y 25 linear feet completed

A total of 161 linear feet of trench (including excavated soil, a manhole, and pipes) identified on the design drawings and 25 linear feet not identified on the design drawings were completed by the HPNS Team.

Excavated Manhole MH1244 was placed on plastic pending further activities.

The HPNS Team provided the RASO with analytical results for the sediment samples collected from Manholes MH1302 and MH1303. Both manholes will be placed in LLRW bins for off-site disposal due to the presence of ¹³⁷Cs contamination as follows:

- Manhole MH1302 (07-PEMH1302-013-01) with ¹³⁷Cs at 0.2161 pCi/g
- Manhole MH1303 (07-PEMH1303-014-01) with ¹³⁷Cs at 0.1319 pCi/g

The HPNS Team provided the RASO with analytical results for the investigative samples collected from Trench Unit No. 249. Characterization and remediation will be performed due to the presence of ¹³⁷Cs contamination at Sample Point 17 (0.2726 pCi/g).

The HPNS Team provided the RASO with analytical results for the systematic samples collected from Trench Unit No. 248; no activity above the release criteria was identified.

A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

Internal Draft Radiological Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: May 9, 2012	RAD EMAC – CTO 002
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Overview

The HPNS Team continued field activities for the North Pier and Work Areas #32, #33, and #34. Details of the work activities performed are provided in the sections below.

North Pier

Approximately 3 cubic yards of soil was remediated from Class 1 Survey Unit 11 by the HPNS Team and placed in LLRW bin GFLU002019 for off-site disposal.

The HPNS Team performed Class 1 survey activities for Survey Unit 11. A post-remediation gamma static measurement was logged at 6,492 cpm. In addition, one soil sample was collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

The HPNS Team issued record drawings to identify post-remediation sample collection locations in Class 1 Survey Unit 11.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

A total of nine investigative soil samples were collected from Trench Unit Nos. 302 and 303 by the HPNS Team and submitted to the on-site laboratory for analysis.

Backfill activities were completed for Trench Unit No. 243 by the HPNS Team.

Site restoration activities were continued by the HPNS Team over backfilled trench units along Spear Avenue in Work Area #33.

A variety of housekeeping activities were performed throughout Parcel C by the HPNS Team including street sweeping.

Issues/Items Pending Action

Internal Draft Radiological Removal Action Completion Report



TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: May 9, 2012

RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

The HPNS Team received a total of 17 truckloads of material at RSY3 for processing.

The HPNS Team performed the following RSY4 processing activities:

One truckload of material was received for processing.

Issued drawing to identify biased and systematic sample collection locations for ES Unit 0698.

Remediated approximately 0.25 cubic yards of soil from ES Unit 0698 and placed the material in LLRW bins pending off-site disposal by the DON radiological waste contractor.

The HPNS Team continued radiological monitoring and control activities for the RSYs including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring, as appropriate.

The HPNS Team provided the RASO with the off-site laboratory analytical results for ES Unit 0660 and a request for concurrence to transfer the material to the DON non-LLRW contractor for off-site disposal at a CERCLA landfill.

On-Site and Off-Site Laboratories

On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:

Soil samples received for gamma spectroscopy analysis: 50

Air samples received: 10

Samples analyzed by gamma spectroscopy: 53

Gamma spectroscopy samples recounted: 9

Protean swipe samples counted: 96

Protean air samples counted: 10

A total of 211 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel E and Building 500 Series Removal Action

Report Date: May 9, 2012

RMAC – CTO 07

Overview

The HPNS Team continued field activities for the Building 707 Triangle, the 500 Series Area, and Work Areas #21 and #36. Details of the work activities performed are provided in the sections below.

Building 707 Triangle

Approximately 92 cubic yards of soil was remediated from Class 1 Survey Unit 21 by the HPNS Team and placed in LLRW bins AWIU000295, GFLU002019, GFLU002035, GFLU002059, GFLU00213, and GFLU002137 for off-site disposal.

The HPNS Team performed Class 1 survey activities for Survey Unit 23. A total of 400 gamma scan readings were logged with a maximum reading of 300 cpm (FIDLER). The RSO is in the process of reviewing these data.

500 Series Area

Towed array gamma scan surveys were performed over Class 2 Survey Unit 23.

The HPNS Team performed Class 1 survey activities for Survey Unit 13. A total of 4 biased and 36 systematic gamma static measurements were logged with a maximum measurement of 7,320 cpm. In addition, 40 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

The HPNS Team excavated approximately 216 cubic yards of soil from Work Area #36 and transferred the material to both RSY3 and RSY4 for processing. Excavation activities were performed for the following trench segments:

- 07-500-38-1B 10 linear feet completed
- 07-E36-38-1A 9 linear feet completed
- 07-E36-38-1B 10 linear feet completed
- 07-E36-39-1F 38 linear feet completed
- 07-E36-39-1W 30 linear feet completed
- 07-E36-39-8F 12 linear feet completed
- 07-E36-39-8G 40 linear feet completed

A total of 96 linear feet of trench (including excavated soil and pipes) identified on the design drawings and 52 linear feet not identified on the design drawings were completed by the HPNS Team.

Pipes excavated from trench segments 07-500-38-1B, 07-E36-39-8F, and 07-E36-39-8G were placed on plastic pending further activities.

Crushed pipe and debris excavated from trench segments 07-E36-00-1A and 07-E36-00-1B were placed in LLRW bin GFLU002131 for off-site disposal.

The HPNS Team provided the RASO with the Internal Draft SUPR for Trench Unit No. 241 (associated with the Building 529 Site) along with a request for concurrence to backfill.

A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

Internal Draft Radiological Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: May 31, 2012

RAD EMAC – CTO 002

Overview

The HPNS Team continued field activities for Buildings 211, 231, and 253; the North Pier; and Work Areas #32 through #35. Details of the work activities performed are provided below.

North Pier

The HPNS Team performed Class 1 survey activities as follows:

Survey Unit 1 A total of 20 systematic gamma static measurements were logged with a maximum measurement of 6,227 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis.

Survey Unit 8 A total of 20 systematic gamma static measurements were logged with a maximum measurement of 6,104 cpm and 20 soil samples were collected and submitted to the on-site laboratory for analysis.

Survey Unit 10 A total of 20 systematic gamma static measurements were logged with a maximum measurement of 6,110 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis.

Survey Unit 11 A total of 20 systematic gamma static measurements were logged with a maximum measurement of 6,599 cpm and 20 soil samples were collected and submitted to the on-site laboratory for analysis.

The RSO is in the process of reviewing the survey data for Survey Units 1, 8, 10, and 11.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

A total of 18 systematic samples were collected from Trench Unit No. 304 (associated with the North Pier) by the HPNS Team and submitted to the on-site laboratory for analysis.

Backfill activities were continued for Trench Unit No. 238 (associated with Buildings 211, 231, and 253) by the HPNS Team.

The HPNS Team and the RASO concurred on backfilling of Trench Unit No. 242.

The HPNS Team issued an updated Parcel C Trench Survey Unit Key Plan and Figures 1-1/3-1 for inclusion in the Internal Draft SUPR for Trench Unit No. 302.

Site restoration activities were performed by the HPNS Team over backfilled trench units in Work Area #33.

Issues/Items Pending Action

Internal Draft Radiological Removal Action Completion Report



TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: May 31, 2012

RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

The HPNS Team received a total of 13 truckloads of material at RSY3 for processing.

The HPNS Team performed the following RSY4 processing activities:

A total of 13 truckloads of material were received for processing.

Began transfer of ES Unit 0700 to the stockpile area.

The HPNS Team provided the RASO with the off-site laboratory analytical results for ES Unit 0686 and a request for concurrence to use the materials as trench backfill.

The HPNS Team continued radiological monitoring and control activities for the RSYs including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring, as appropriate.

After evaluating the data, the RASO concurred with the following:

Transferring ES Unit 0678 to the DON non-LLRW contractor for off-site disposal at a CERCLA landfill.

Reuse of ES Units 0658, 0685, 0687, and 0688 as trench backfill.

Basewide Support

One outgoing materials and equipment survey was performed by the HPNS Team.

On-Site and Off-Site Laboratories

On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:

Soil samples received for gamma spectroscopy analysis: 140

Swipe samples received for Protean counts: 151

Air samples received: 13

Samples analyzed by gamma spectroscopy: 76

Gamma spectroscopy samples recounted: 13

Protean swipe samples counted: 20

Protean air samples counted: 16

A total of 227 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.

A total of 71 samples were sent to TestAmerica St. Louis for analysis.



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: May 31, 2012

RMAC – CTO 07

Overview

The HPNS Team continued field activities for the Building 520 Site, the 500 Series Area, and Work Area #36. Details of the activities performed are provided in the sections below.

Building 520 Site

The HPNS Team provided the RASO with off-site analytical results for the systematic samples collected from Class 1 Survey Unit 4. Characterization and remediation will be performed due to the presence of ⁹⁰Sr contamination at Sample Point 61 (0.365 pCi/g).

500 Series Area

The HPNS Team continued soil grading and debris removal in preparation for upcoming survey activities in Class 2 Survey Units 22 and 23.

The HPNS Team performed Class 1 survey activities for Survey Unit 17. A total of six characterization gamma static measurements were logged with a maximum measurement of 6,340 cpm. In addition, six soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

The HPNS Team provided the RASO with total strontium analytical results for the ¹³⁷Cs contaminated samples collected from Class 1 Survey Unit 17; no further contamination was identified.

The HPNS Team issued drawings to identify locations for characterization sample collection in Class 1 Survey Unit 17.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

The HPNS Team excavated approximately 312 cubic yards of soil from Work Area #36 and transferred the material to both RSY3 and RSY4 for processing. Excavation activities were performed for the following trench segments:

- 07-E36-00-4D 10 linear feet completed
- 07-E36-00-4E 51 linear feet completed
- 07-E36-00-4F 5 linear feet completed
- 07-E36-00-4G 27 linear feet completed
- 07-E36-38-1U 35 linear feet completed

- 07-E36-38-1V 39 linear feet completed
- 07-E36-38-1W 38 linear feet completed
- 07-E36-38-2B 17 linear feet completed
- 07-E36-38-4A 9 linear feet completed
- 07-E36-38-5A 10 linear feet completed

A total of 241 linear feet of trench (including excavated soil, manholes, and pipes) identified on the design drawings was completed by the HPNS Team.

Excavated Manholes MH1257, MH1261, MH1266, and MH1267 were placed on plastic pending further activities.

The HPNS Team investigated trench segment 07-E36-38-1U for the presence of pipe. Although depicted on the design drawing, no pipe was found during the investigation.

A total of four sediment samples were collected from excavated Manholes MH1257, MH1261, MH1266, and MH1267 (MH0016 through MH0019) by the HPNS Team and submitted to the on-site laboratory for analysis.

Survey activities were performed by the HPNS Team for pipe sections removed from trench segment 07-E36-39-1R (Survey No. HPS-PEPIPE-053112-048). During the survey activities, a total of six swipe samples were collected and submitted to the on-site laboratory for analysis.

Survey activities were performed by the HPNS Team on concrete pipe bedding material removed from Trench Unit No. 307 (Survey No. HPS-A-TU307-001). During the survey activities, a total of eight swipe samples were collected and submitted to the on-site laboratory for analysis.

The HPNS Team issued an updated Parcel E Trench Survey Unit Key Plan and Figures 1-1/3-1 for inclusion in the Internal Draft SUPR for Trench Unit No. 301.

A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

Internal Draft Radiological Removal Action Completion Report

Area	Survey Unit	Sample Point	Sample Type	Sample ID	Date Collected	COC Radiological Technician
NPR	11	1	Biased	02NPR-S0011-F001-01	21-Mar-12	Ray Roberson
NPR	11	2	Biased	02NPR-S0011-F002-01	21-Mar-12	Ray Roberson
NPR	11	3	Systematic	02NPR-S0011-F003-01	21-Mar-12	Ray Roberson
NPR	11	4	Systematic	02NPR-S0011-F004-01	21-Mar-12	Ray Roberson
NPR	11	5	Systematic	02NPR-S0011-F005-01	21-Mar-12	Ray Roberson
NPR	11	6	Systematic	02NPR-S0011-F006-01	21-Mar-12	Ray Roberson
NPR	11	7	Systematic	02NPR-S0011-F007-01	21-Mar-12	Ray Roberson
NPR	11	8	Systematic	02NPR-S0011-F008-01	21-Mar-12	Ray Roberson
NPR	11	9	Systematic	02NPR-S0011-F009-01	21-Mar-12	Ray Roberson
NPR	11	10	Systematic	02NPR-S0011-F010-01	21-Mar-12	Ray Roberson
NPR	11	11	Systematic	02NPR-S0011-F011-01	21-Mar-12	Ray Roberson
NPR	11	12	Systematic	02NPR-S0011-F012-01	21-Mar-12	Ray Roberson
NPR	11	13	Systematic	02NPR-S0011-F013-01	21-Mar-12	Ray Roberson
NPR	11	14	Systematic	02NPR-S0011-F014-01	21-Mar-12	Ray Roberson
NPR	11	15	Systematic	02NPR-S0011-F015-01	21-Mar-12	Ray Roberson
NPR	11	16	Systematic	02NPR-S0011-F016-01	21-Mar-12	Ray Roberson
NPR	11	17	Systematic	02NPR-S0011-F017-01	21-Mar-12	Ray Roberson
NPR	11	18	Systematic	02NPR-S0011-F018-01	21-Mar-12	Ray Roberson
NPR	11	19	Systematic	02NPR-S0011-F019-01	21-Mar-12	Ray Roberson
NPR	11	20	Systematic	02NPR-S0011-F020-01	21-Mar-12	Ray Roberson
NPR	11	21	Systematic	02NPR-S0011-F021-01	21-Mar-12	Ray Roberson
NPR	11	22	Systematic	02NPR-S0011-F022-01	21-Mar-12	Ray Roberson
NPR	11	23	Characterization	02NPR-S0011-F023-01	01-May-12	Ray Roberson
NPR	11	24	Characterization	02NPR-S0011-F024-01	01-May-12	Ray Roberson
NPR	11	25	Characterization	02NPR-S0011-F025-01	01-May-12	Ray Roberson
NPR	11	26	Post-Remediation	02NPR-S0011-F026-01	09-May-12	Joe Cunningham
NPR	11	27	Systematic	02NPR-S0011-F027-01	31-May-12	Ray Roberson
NPR	11	28	Systematic	02NPR-S0011-F028-01	31-May-12	Ray Roberson
NPR	11	29	Systematic	02NPR-S0011-F029-01	31-May-12	Ray Roberson
NPR	11	30	Systematic	02NPR-S0011-F030-01	31-May-12	Ray Roberson
NPR	11	31	Systematic	02NPR-S0011-F031-01	31-May-12	Ray Roberson
NPR	11	32	Systematic	02NPR-S0011-F032-01	31-May-12	Ray Roberson
NPR	11	33	Systematic	02NPR-S0011-F033-01	31-May-12	Ray Roberson
NPR	11	34	Systematic	02NPR-S0011-F034-01	31-May-12	Ray Roberson
NPR	11	35	Systematic	02NPR-S0011-F035-01	31-May-12	Ray Roberson
NPR	11	36	Systematic	02NPR-S0011-F036-01	31-May-12	Ray Roberson
NPR	11	37	Systematic	02NPR-S0011-F037-01	31-May-12	Ray Roberson
NPR	11	38	Systematic	02NPR-S0011-F038-01	31-May-12	Ray Roberson
NPR	11	39	Systematic	02NPR-S0011-F039-01	31-May-12	Ray Roberson
NPR	11	40	Systematic	02NPR-S0011-F040-01	31-May-12	Ray Roberson
NPR	11	41	Systematic	02NPR-S0011-F041-01	31-May-12	Ray Roberson
NPR	11	42	Systematic	02NPR-S0011-F042-01	31-May-12	Ray Roberson
NPR	11	43	Systematic	02NPR-S0011-F043-01	31-May-12	Ray Roberson
NPR	11	44	Systematic	02NPR-S0011-F044-01	31-May-12	Ray Roberson
NPR	11	45	Systematic	02NPR-S0011-F045-01	31-May-12	Ray Roberson
NPR	11	46	Systematic	02NPR-S0011-F046-01	31-May-12	Ray Roberson
NPR	11	47	Systematic	02NPR-S0011-F047-01	30-Oct-12	J Taylor/M Winder
NPR	11	48	Systematic	02NPR-S0011-F048-01	30-Oct-12	J Taylor/M Winder
NPR	11	49	Systematic	02NPR-S0011-F049-01	30-Oct-12	J Taylor/M Winder
NPR	11	50	Systematic	02NPR-S0011-F050-01	30-Oct-12	J Taylor/M Winder
NPR	11	51	Systematic	02NPR-S0011-F051-01	30-Oct-12	J Taylor/M Winder
NPR	11	52	Systematic	02NPR-S0011-F052-01	30-Oct-12	J Taylor/M Winder

On-Site Laboratory (pCi/g)				
K-40	Ra-226	Cs-137	Bi-214	Pb-214
20.62	0.8344	0	0.3923	0.5742
21.17	0.8241	0.009509	0.492	0.6095
17.35	0.7073	0.02243	0.3705	0.5909
18.9	0.7509	0.01505	0.5162	0.5585
22.38	1.032	-0.008317	0.5256	0.6765
24.53	0.8591	-0.01114	0.733	0.7075
9.392	0.3841	0.004186	0.2195	0.4254
25.05	1.023	0.004033	0.5411	0.7411
23.61	1.009	0	0.5528	0.7617
18.09	1.131	-0.009382	0.7797	0.9428
11.85	0.601	0.01005	0.4899	0.5222
12.72	0.8059	-0.009666	0.3328	0.5829
8.351	0.4574	-0.0001693	0.2701	0.4751
20.64	1.168	0.03255	0.6401	0.5982
11.77	1.143	0.01194	0.3707	0.4143
14.89	0.7807	0.04492	0.3756	0.4204
8.834	-0.2215	0	0.2512	0.3523
15.5	1.038	0.0155	0.7	0.7635
9.502	0.6919	0.01187	0.4181	0.3953
8.227	0.643	0.0008957	0.1788	0.1434
10.99	0.5979	0.0283	0.4605	0.4887
4.688	-0.3132	0.009596	0.1495	0.174
9.044	0.4833	0.0123	0.196	0.3266
13.03	0.8089	0.0632	0.4108	0.4596
12.62	0.5318	0.02155	0.4683	0.5034
16.94	1.12	0.08753	0.4949	0.5502
1.856	0.3806	0.004441	0.1239	0.1979
1.343	0.1962	0.0007878	0.01734	0.1758
1.147	0.1606	0.007908	0.05789	0.1973
1.084	0.1755	0.005199	0.06314	0.07671
1.655	0.2181	0.01352	0.07604	0.05306
1.195	0.3406	0.002224	-0.005852	0.183
1.553	0.6204	-0.00003543	0.1141	0.01256
1.298	0	0.001312	0.0504	0.1889
1.354	0.3353	-0.007342	0.07955	0.0622
1.117	0.05995	-0.00221	0.054	0.1572
0.6817	0.1337	0.002293	0.2482	0.09497
1.06	0.1437	0	0.07294	0.07564
0.9402	-0.03884	0	0.09427	0.07806
0.8305	0	0.005108	0.1077	0.1186
0.6744	-0.006658	0.006463	0.06961	-0.0219
2.071	0.2002	0.01107	0.06897	0.1394
0.8713	0.2076	-0.00007423	0.04136	0.09326
1.102	0.3324	0.0006302	0.0374	0.1811
2.274	-0.01217	0.005858	0.08534	0.0887
1.303	0.1565	0.007445	0.07097	0.08395
14.06	0.6371	0.005556	0.4196	0.4585
12.14	0.2555	0.005146	0.4333	0.409
9.099	0.25	-0.001031	0.1485	0.4051
16.97	0.6765	-0.004835	0.5016	0.5628
13.41	1.043	0.007397	0.4005	0.4926
8.479	-0.03818	0.008437	0.3315	0.2834

Off-Site Laboratory (pCi/g)				
K-40	Ra-226	Cs-137	Bi-214	Pb-214
16.2	0.466	0.0343	0.466	0.629
16.6	0.567	0.0549	0.567	0.585
18.5	0.764	0.0328	0.764	0.872
26.3	0.772	0	0.772	0.85
8.17	0.341	0.0172	0.341	0.394
20.7	0.703	0.0141	0.703	0.773
18.5	0.643	0	0.643	0.675
16.2	1.03	0.00162	1.03	1.07
8.94	0.502	0.0307	0.502	0.354
11	0.58	0.0125	0.58	0.412
8.49	0.283	0.00658	0.283	0.42
17.2	0.553	-0.0298	0.553	0.435
10.4	0.5	0.0109	0.5	0.449
15.2	0.417	0.0296	0.417	0.538
9.28	0.468	0	0.468	0.457
12.8	0.9	0.00554	0.9	0.928
7.27	0.481	0	0.481	0.507
4.11	0.13	0.039	0.13	0.356
9.9	0.416	0.118	0.416	0.468
6.62	0.238	0.00237	0.238	0.428
1.24	0.0897	0	0.0897	0.123
1.41	0.231	0.00922	0.231	0.23
1.18	0.0475	0.0119	0.0475	0.15
1.25	0.251	-0.011	0.251	0.213
1.36	0.0176	0.000286	0.0176	0.111
1.08	0.304	0	0.304	0.268
0.714	0.225	-0.0193	0.225	0.229
1.17	0.0445	-0.0116	0.0445	0.0894
1.58	0.08	0.000263	0.08	0.237
1.3	0.125	-0.00445	0.125	0.151
1.23	0.1	-0.00409	0.1	0.177
1.36	0.0374	-0.00241	0.0374	0.223
1.41	0.0294	0.0202	0.0294	0.0738
0.953	0.0963	-0.000725	0.0963	0.123
1.42	0.106	0.0000477	0.106	0.253
1.12	0.236	-0.000771	0.236	0.133
1.11	0.238	0	0.238	0.195
1.35	0.107	-0.00329	0.107	0.14
1.76	0.157	-0.00036	0.157	0.289
1.46	0.151	0.0145	0.151	0.221

Area	Survey Unit	Sample Point	Sample Type	Sample ID	Date Collected	COC Radiological Technician
NPR	11	53	Systematic	02NPR-S0011-F053-01	30-Oct-12	J Taylor/M Winder
NPR	11	54	Systematic	02NPR-S0011-F054-01	30-Oct-12	J Taylor/M Winder
NPR	11	55	Systematic	02NPR-S0011-F055-01	30-Oct-12	J Taylor/M Winder
NPR	11	56	Systematic	02NPR-S0011-F056-01	30-Oct-12	J Taylor/M Winder
NPR	11	57	Systematic	02NPR-S0011-F057-01	30-Oct-12	J Taylor/M Winder
NPR	11	58	Systematic	02NPR-S0011-F058-01	30-Oct-12	J Taylor/M Winder
NPR	11	59	Systematic	02NPR-S0011-F059-01	30-Oct-12	J Taylor/M Winder
NPR	11	60	Systematic	02NPR-S0011-F060-01	30-Oct-12	J Taylor/M Winder
NPR	11	61	Systematic	02NPR-S0011-F061-01	30-Oct-12	J Taylor/M Winder
NPR	11	62	Systematic	02NPR-S0011-F062-01	30-Oct-12	J Taylor/M Winder
NPR	11	63	Systematic	02NPR-S0011-F063-01	30-Oct-12	J Taylor/M Winder
NPR	11	64	Systematic	02NPR-S0011-F064-01	30-Oct-12	J Taylor/M Winder
NPR	11	65	Systematic	02NPR-S0011-F065-01	30-Oct-12	J Taylor/M Winder
NPR	11	66	Systematic	02NPR-S0011-F066-01	30-Oct-12	J Taylor/M Winder

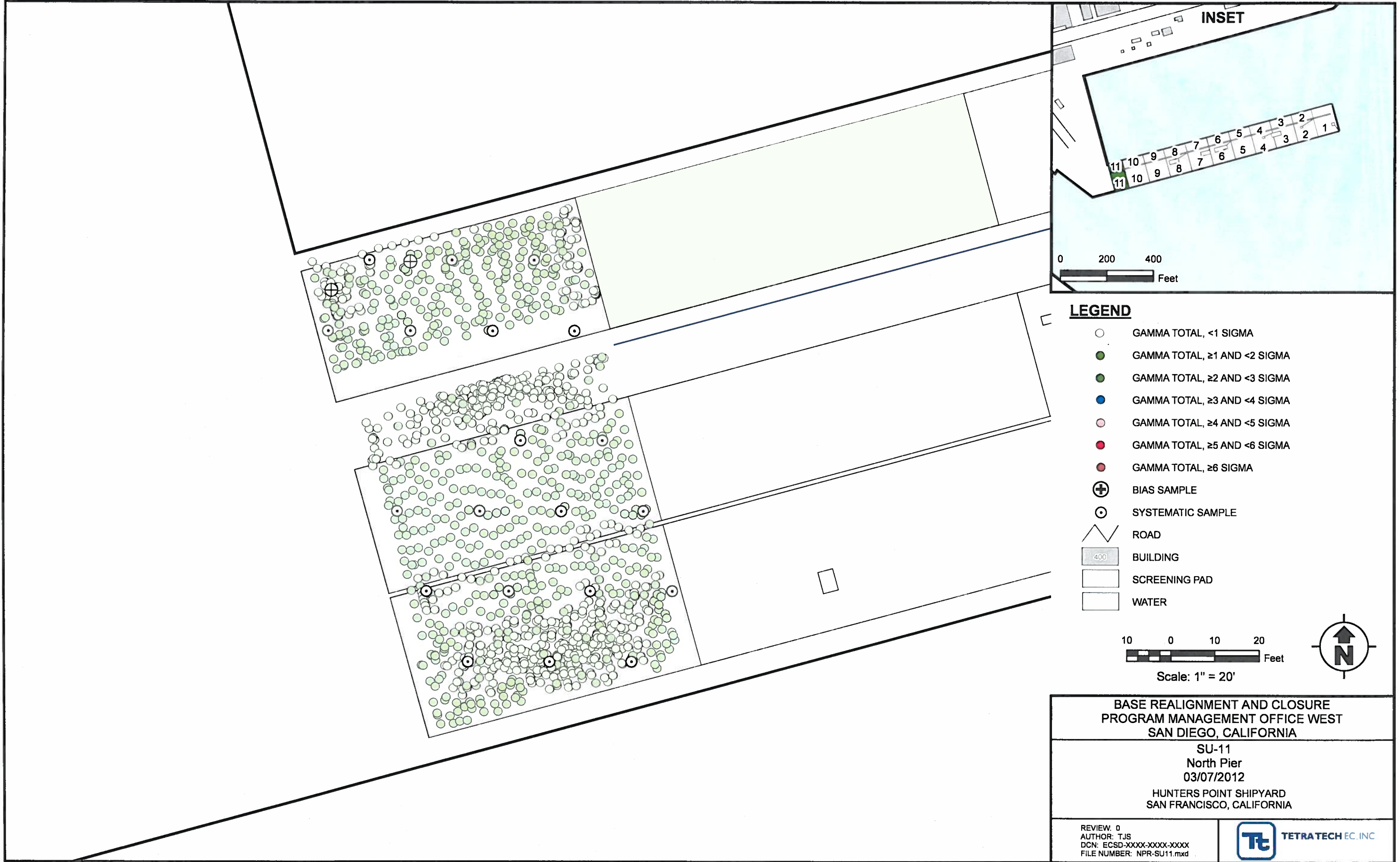
On-Site Laboratory (pCi/g)

K-40	Ra-226	Cs-137	Bi-214	Pb-214
7.729	0.7058	-0.001774	0.2842	0.2897
7.245	0.3539	0.005391	0.1395	0.3227
8.09	0.7814	-0.00497	0.2325	0.4314
7.659	0.4121	-0.0006429	0.1912	0.2862
7.622	0.7293	-0.008737	0.297	0.1676
13.23	0.8045	0.009238	0.4011	0.3905
10.76	0.7667	0.01065	0.1496	0.3622
5.482	0.2624	0.01339	0.101	0.2512
9.871	0.731	0.002692	0.3444	0.3717
7.096	0.4656	0.004129	0.3798	0.356
7.92	0.8474	0	0.2265	0.1184
7.835	0.3401	-0.007842	0.1825	0.1433
10.78	0.8868	0	0.379	0.4846
4.761	0.2135	-0.001662	0.004619	0.04502

Off-Site Laboratory (pCi/g)

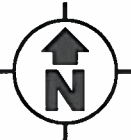
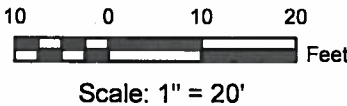
K-40	Ra-226	Cs-137	Bi-214	Pb-214

Highlighted Activities: Ra-226 ≥ 1.633 (On-site) & 1.375 (Off-site) ; Cs-137 ≥ 0.113 ; Bi-214 ≥ 1.485 ; Pb-214 ≥ 1.485 (pCi/g)



LEGEND

- GAMMA TOTAL, <1 SIGMA
- GAMMA TOTAL, ≥1 AND <2 SIGMA
- GAMMA TOTAL, ≥2 AND <3 SIGMA
- GAMMA TOTAL, ≥3 AND <4 SIGMA
- GAMMA TOTAL, ≥4 AND <5 SIGMA
- GAMMA TOTAL, ≥5 AND <6 SIGMA
- GAMMA TOTAL, ≥6 SIGMA
- BIAS SAMPLE
- SYSTEMATIC SAMPLE
- ROAD
- BUILDING
- SCREENING PAD
- WATER



BASE REALIGNMENT AND CLOSURE
PROGRAM MANAGEMENT OFFICE WEST
SAN DIEGO, CALIFORNIA

SU-11
North Pier
03/07/2012

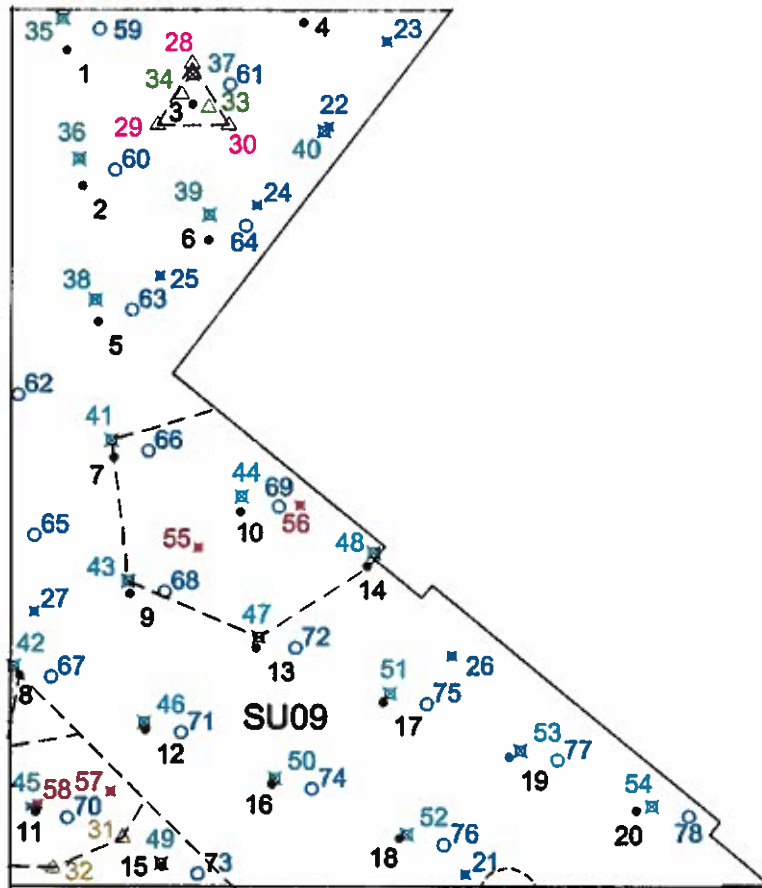
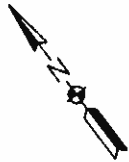
HUNTERS POINT SHIPYARD
SAN FRANCISCO, CALIFORNIA

REVIEW: 0
AUTHOR: TJS
DCN: ECSD-XXXX-XXXX-XXXX
FILE NUMBER: NPR-SU11.mxd



TETRA TECH EC, INC

P:\CTO-03 CAD FILES\DWG FILES\707 SURVEY UNITS\707_SURVEY _10-15-12.DWG
 PLOT/UPDATE: OCT 18 2012 10:30:06



LEGEND:

- 1 SYSTEMATIC 1 SAMPLES 1-20
- 21 BIASED SAMPLES 21-27
- △ 28 CHARACTERIZATION 1 SAMPLES 28-30
- △ 31 POST REMEDIATION 1 SAMPLES 31-32
- △ 33 POST REMEDIATION 2 SAMPLES 33-34
- 41 SYSTEMATIC 2 SAMPLES 35-54
- 33 POST REMEDIATION 3 SAMPLES 55-58
- 59 SYSTEMATIC 3 SAMPLES 59-78
- PREVIOUS REMEDIATION

RECORD COPY

SCALE 1:30

HUNTERS POINT SHIPYARD
SAN FRANCISCO, CA
 P.O. BOX 884836
 SAN FRANCISCO, CA 94188

BUILDING 707
SURVEY UNIT 9



TETRA TECH EC, INC
 1230 COLUMBIA STREET, SUITE 750
 SAN DIEGO, CA 92101
 TEL: (619) 234-8690 FAX: (619) 234-8591



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1	11/22/2010 9:31	5453	5817	-364	479-BKGDS1A	7378	
2	11/22/2010 9:32	5263	5817	-554	479-BKGDS1A	7378	
3	11/22/2010 9:33	6275	5817	458	479-BKGDS1A	7378	
4	11/22/2010 9:35	7045	5817	1228	479-BKGDS1A	7378	
5	11/22/2010 9:36	5194	5817	-623	479-BKGDS1A	7378	
6	11/22/2010 9:37	6852	5817	1035	479-BKGDS1A	7378	
7	11/22/2010 9:39	5833	5817	16	479-BKGDS1A	7378	
8	11/22/2010 9:40	5751	5817	-66	479-BKGDS1A	7378	
9	11/22/2010 9:41	5912	5817	95	479-BKGDS1A	7378	
10	11/22/2010 9:43	6968	5817	1151	479-BKGDS1A	7378	
11	11/22/2010 9:44	5337	5817	-480	479-BKGDS1A	7378	
12	11/22/2010 9:45	5620	5817	-197	479-BKGDS1A	7378	
13	11/22/2010 9:47	6001	5817	184	479-BKGDS1A	7378	
14	11/22/2010 9:48	6658	5817	841	479-BKGDS1A	7378	
15	11/22/2010 9:49	5193	5817	-624	479-BKGDS1A	7378	
16	11/22/2010 9:51	6194	5817	377	479-BKGDS1A	7378	
17	11/22/2010 9:52	7606	5817	1788	479-BKGDS1A	7378	
18	11/22/2010 9:53	6888	5817	1071	479-BKGDS1A	7378	
19	11/22/2010 9:54	8428	5817	2606	479-BKGDS1A	7378	
20	11/22/2010 9:56	6951	5817	1134	479-BKGDS1A	7378	
21	11/30/2010 11:29	8746	5817	2929	479-BKGDS1A	7378	
22	11/30/2010 11:30	8802	5817	2485	479-BKGDS1A	7378	
23	11/30/2010 11:31	7646	5817	1828	479-BKGDS1A	7378	
24	11/30/2010 11:33	7695	5817	1818	479-BKGDS1A	7378	
25	11/30/2010 11:34	7154	5817	1337	479-BKGDS1A	7378	
26	11/30/2010 11:35	7997	5817	2120	479-BKGDS1A	7378	
27	11/30/2010 11:37	7263	5817	1446	479-BKGDS1A	7378	
28	1/7/2011 12:53	5603	5817	-214	479-BKGDS1A	7378	
29	1/7/2011 12:54	5590	5817	-227	479-BKGDS1A	7378	
30	1/7/2011 12:55	7871	5817	2054	479-BKGDS1A	7378	
31	1/20/2011 11:03	7609	5817	1792	479-BKGDS1A	7378	
32	1/20/2011 11:04	7199	5817	1382	479-BKGDS1A	7378	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
33	2/16/2011 13:47	4827	5817	-990	479-BKGD51A	7378	
34	2/16/2011 13:48	4731	5817	-1086	479-BKGD51A	7378	
35	3/8/2011 10:39	5390	5817	-427	479-BKGD51A	7378	
36	3/8/2011 10:40	5370	5817	-447	479-BKGD51A	7378	
37	3/8/2011 10:41	4790	5817	-1027	479-BKGD51A	7378	
38	3/8/2011 10:42	6022	5817	205	479-BKGD51A	7378	
39	3/8/2011 10:44	6885	5817	1068	479-BKGD51A	7378	
40	3/8/2011 10:45	7743	5817	1926	479-BKGD51A	7378	
41	3/8/2011 10:46	6097	5817	280	479-BKGD51A	7378	
42	3/8/2011 10:48	5509	5817	-308	479-BKGD51A	7378	
43	3/8/2011 10:49	5981	5817	164	479-BKGD51A	7378	
44	3/8/2011 10:50	7135	5817	1318	479-BKGD51A	7378	
45	3/8/2011 10:51	5747	5817	-70	479-BKGD51A	7378	
46	3/8/2011 10:52	5756	5817	-61	479-BKGD51A	7378	
47	3/8/2011 10:54	6362	5817	545	479-BKGD51A	7378	
48	3/8/2011 10:55	6237	5817	420	479-BKGD51A	7378	
49	3/8/2011 10:56	6315	5817	498	479-BKGD51A	7378	
50	3/8/2011 10:57	6173	5817	356	479-BKGD51A	7378	
51	3/8/2011 10:59	7335	5817	1518	479-BKGD51A	7378	
52	3/8/2011 11:00	7095	5817	1278	479-BKGD51A	7378	
53	3/8/2011 11:01	8136	5817	2319	479-BKGD51A	7378	
54	3/8/2011 11:02	7095	5817	1278	479-BKGD51A	7378	
55	5/5/2011 15:26	5475	5817	-342	479-BKGD51A	7378	
56	5/5/2011 15:28	5297	5817	-520	479-BKGD51A	7378	
57	5/5/2011 15:29	6493	5817	676	479-BKGD51A	7378	
58	5/5/2011 15:30	6694	5817	877	479-BKGD51A	7378	
59	6/8/2011 10:19	5291	5873	-582	518-BKGD51B	7049	
60	6/8/2011 10:20	5069	5873	-804	518-BKGD51B	7049	
61	6/8/2011 10:22	6400	5873	527	518-BKGD51B	7049	
62	6/8/2011 10:23	4872	5873	-1001	518-BKGD51B	7049	
63	6/8/2011 10:25	6050	5873	177	518-BKGD51B	7049	
64	6/8/2011 10:26	6758	5873	885	518-BKGD51B	7049	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
65	6/8/2011 10:27	5791	5873	-82	518-BKGDS1B	7049	
66	6/8/2011 10:28	5066	5873	-807	518-BKGDS1B	7049	
67	6/8/2011 10:30	5597	5873	-276	518-BKGDS1B	7049	
68	6/8/2011 10:31	5283	5873	-590	518-BKGDS1B	7049	
69	6/8/2011 10:32	4648	5873	-1225	518-BKGDS1B	7049	
70	6/8/2011 10:33	4868	5873	-1005	518-BKGDS1B	7049	
71	6/8/2011 10:34	4793	5873	-1080	518-BKGDS1B	7049	
72	6/8/2011 10:36	5932	5873	59	518-BKGDS1B	7049	
73	6/8/2011 10:37	5099	5873	-774	518-BKGDS1B	7049	
74	6/8/2011 10:38	5023	5873	-850	518-BKGDS1B	7049	
75	6/8/2011 10:39	4954	5873	-919	518-BKGDS1B	7049	
76	6/8/2011 10:58	5060	5873	-813	518-BKGDS1B	7049	
77	6/8/2011 10:59	5085	5873	-788	518-BKGDS1B	7049	
78	6/8/2011 11:00	5014	5873	-859	518-BKGDS1B	7049	

Net Gamma cpm Min: -1225
Summary Avg: 340
Max: 2929
St Dev: 1051

Readings > 3σ investigation level are highlighted in blue

* Background ID correlates to instrument reference area background identification number

Gamma measurements > 3σ investigation level are verified by 2360 beta measurements



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

2350 Identification #: 479

Instrument/Probe Type: 2350-1 / 44-10

Instrument Serial #: 129430

Probe Serial #: 012176

Calibration Due Date: 5/12/2011

Reference Area Background Identification #: 479-BKGDS1A Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	07/29/2010 10:01	5432
2	07/29/2010 10:05	6064
3	07/29/2010 10:06	5667
4	07/29/2010 10:07	5647
5	07/29/2010 10:08	6956
6	07/29/2010 10:09	6120
7	07/29/2010 10:11	5199
8	07/29/2010 10:12	5083
9	07/29/2010 10:14	5880
10	07/29/2010 10:15	5567
11	07/29/2010 10:17	6268
12	07/29/2010 10:18	5786
13	07/29/2010 10:19	5405
14	07/29/2010 10:21	5984
15	07/29/2010 10:22	7018
16	07/29/2010 10:23	5521
17	07/29/2010 10:24	5872
18	07/29/2010 10:26	5464
19	07/29/2010 10:27	6157
20	07/29/2010 10:28	5241

Gamma Mean Background (cpm): 5817

Standard Deviation: 520

Gamma 3σ Investigation
Level (cpm): 7378



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

2350 Identification #: 518

Instrument/Probe Type: 2350-1 / 44-10

Instrument Serial #: 126182

Probe Serial #: 230161

Calibration Due Date: 11/17/2011

Reference Area Background Identification #: 518-BKGDS1B Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	03/01/2011 10:24	5734
2	03/01/2011 10:26	6197
3	03/01/2011 10:27	5923
4	03/01/2011 10:28	5458
5	03/01/2011 10:29	6885
6	03/01/2011 10:30	5930
7	03/01/2011 10:31	5459
8	03/01/2011 10:32	5899
9	03/01/2011 10:34	5865
10	03/01/2011 10:35	5347
11	03/01/2011 10:36	5470
12	03/01/2011 10:37	5852
13	03/01/2011 10:38	6022
14	03/01/2011 10:40	6222
15	03/01/2011 10:41	5742
16	03/01/2011 10:42	5119
17	03/01/2011 10:43	5970
18	03/01/2011 10:44	5959
19	03/01/2011 10:45	6120
20	03/01/2011 10:46	6291

Gamma Mean Background (cpm): 5873

Standard Deviation: 392

Gamma 3 σ Investigation
Level (cpm): 7049



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1	11/22/2010 7:27	72	72	0	513-BKGDS1A	133	
2	11/22/2010 7:29	58	72	-14	513-BKGDS1A	133	
3	11/22/2010 7:30	75	72	3	513-BKGDS1A	133	
4	11/22/2010 7:31	90	72	18	513-BKGDS1A	133	
5	11/22/2010 7:33	53	72	-19	513-BKGDS1A	133	
6	11/22/2010 7:34	68	72	-4	513-BKGDS1A	133	
7	11/22/2010 7:36	67	72	-5	513-BKGDS1A	133	
8	11/22/2010 7:38	63	72	-9	513-BKGDS1A	133	
9	11/22/2010 7:40	78	72	6	513-BKGDS1A	133	
10	11/22/2010 7:42	78	72	6	513-BKGDS1A	133	
11	11/22/2010 7:43	75	72	3	513-BKGDS1A	133	
12	11/22/2010 7:44	82	72	10	513-BKGDS1A	133	
13	11/22/2010 7:46	70	72	-2	513-BKGDS1A	133	
14	11/22/2010 7:47	78	72	6	513-BKGDS1A	133	
15	11/22/2010 7:49	66	72	-6	513-BKGDS1A	133	
16	11/22/2010 7:50	80	72	8	513-BKGDS1A	133	
17	11/22/2010 7:51	72	72	0	513-BKGDS1A	133	
18	11/22/2010 7:52	59	72	-13	513-BKGDS1A	133	
19	11/22/2010 7:54	87	72	15	513-BKGDS1A	133	
20	11/22/2010 7:55	66	72	-6	513-BKGDS1A	133	
21	11/30/2010 11:10	90	72	18	513-BKGDS1A	133	
22	11/30/2010 11:12	77	72	5	513-BKGDS1A	133	
23	11/30/2010 11:13	65	72	-7	513-BKGDS1A	133	
24	11/30/2010 11:15	73	72	1	513-BKGDS1A	133	
25	11/30/2010 11:16	88	72	16	513-BKGDS1A	133	
26	11/30/2010 11:18	95	72	23	513-BKGDS1A	133	
27	11/30/2010 11:23	78	72	6	513-BKGDS1A	133	
28	1/7/2011 11:44	72	72	0	513-BKGDS1A	133	
29	1/7/2011 11:45	67	72	-5	513-BKGDS1A	133	
30	1/7/2011 11:46	65	72	-7	513-BKGDS1A	133	
31	1/20/2011 11:04	105	72	33	513-BKGDS1A	133	
32	1/20/2011 11:06	77	72	5	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
33	2/16/2011 13:53	49	72	-23	513-BKGDS1A	133	
34	2/16/2011 13:55	57	72	-15	513-BKGDS1A	133	
35	3/8/2011 9:24	60	72	-12	513-BKGDS1A	133	
36	3/8/2011 9:25	56	72	-16	513-BKGDS1A	133	
37	3/8/2011 9:26	60	72	-12	513-BKGDS1A	133	
38	3/8/2011 9:28	44	72	-28	513-BKGDS1A	133	
39	3/8/2011 9:29	65	72	-7	513-BKGDS1A	133	
40	3/8/2011 9:30	57	72	-15	513-BKGDS1A	133	
41	3/8/2011 9:32	65	72	-7	513-BKGDS1A	133	
42	3/8/2011 9:33	66	72	-6	513-BKGDS1A	133	
43	3/8/2011 9:34	67	72	-5	513-BKGDS1A	133	
44	3/8/2011 9:35	55	72	-17	513-BKGDS1A	133	
45	3/8/2011 9:37	56	72	-16	513-BKGDS1A	133	
46	3/8/2011 9:38	62	72	-10	513-BKGDS1A	133	
47	3/8/2011 9:39	75	72	3	513-BKGDS1A	133	
48	3/8/2011 9:40	63	72	-9	513-BKGDS1A	133	
49	3/8/2011 9:42	60	72	-12	513-BKGDS1A	133	
50	3/8/2011 9:43	62	72	-10	513-BKGDS1A	133	
51	3/8/2011 9:44	63	72	-9	513-BKGDS1A	133	
52	3/8/2011 9:45	81	72	9	513-BKGDS1A	133	
53	3/8/2011 9:46	78	72	6	513-BKGDS1A	133	
54	3/8/2011 9:48	65	72	-7	513-BKGDS1A	133	
55	5/5/2011 15:20	75	72	3	513-BKGDS1A	133	
56	5/5/2011 15:21	76	72	4	513-BKGDS1A	133	
57	5/5/2011 15:22	77	72	5	513-BKGDS1A	133	
58	5/5/2011 15:23	83	72	11	513-BKGDS1A	133	
59	6/8/2011 9:25	72	72	0	513-BKGDS1A	133	
60	6/8/2011 9:26	75	72	3	513-BKGDS1A	133	
61	6/8/2011 9:28	70	72	-2	513-BKGDS1A	133	
62	6/8/2011 9:37	73	72	1	513-BKGDS1A	133	
63	6/8/2011 9:38	59	72	-13	513-BKGDS1A	133	
64	6/8/2011 9:39	81	72	9	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
65	6/8/2011 9:41	84	72	12	513-BKGD51A	133	
66	6/8/2011 9:42	78	72	6	513-BKGD51A	133	
67	6/8/2011 9:44	67	72	-5	513-BKGD51A	133	
68	6/8/2011 9:45	77	72	5	513-BKGD51A	133	
69	6/8/2011 9:46	75	72	3	513-BKGD51A	133	
70	6/8/2011 9:48	66	72	-6	513-BKGD51A	133	
71	6/8/2011 9:49	65	72	-7	513-BKGD51A	133	
72	6/8/2011 9:50	78	72	6	513-BKGD51A	133	
73	6/8/2011 9:52	72	72	0	513-BKGD51A	133	
74	6/8/2011 9:53	83	72	11	513-BKGD51A	133	
75	6/8/2011 9:54	82	72	10	513-BKGD51A	133	
76	6/8/2011 10:03	88	72	16	513-BKGD51A	133	
77	6/8/2011 10:04	75	72	3	513-BKGD51A	133	
78	6/8/2011 10:06	86	72	14	513-BKGD51A	133	

Net Gamma cpm Min: -28
Summary Avg: 0
 Max: 33
 St Dev: 11

Readings > 3σ investigation level are highlighted in blue

* Background ID correlates to instrument reference area background identification number

Gamma measurements > 3σ investigation level are verified by 2360 beta measurements



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1	11/12/2010 7:34	56	72	-16	513-BKGDS1A	133	
2	11/12/2010 7:35	55	72	-17	513-BKGDS1A	133	
3	11/12/2010 7:35	47	72	-25	513-BKGDS1A	133	
4	11/12/2010 7:35	60	72	-12	513-BKGDS1A	133	
5	11/12/2010 7:36	59	72	-13	513-BKGDS1A	133	
6	11/12/2010 7:36	72	72	0	513-BKGDS1A	133	
7	11/12/2010 7:36	79	72	7	513-BKGDS1A	133	
8	11/12/2010 7:36	60	72	-12	513-BKGDS1A	133	
9	11/12/2010 7:36	83	72	11	513-BKGDS1A	133	
10	11/12/2010 7:36	90	72	18	513-BKGDS1A	133	
11	11/12/2010 7:36	79	72	7	513-BKGDS1A	133	
12	11/12/2010 7:36	63	72	-9	513-BKGDS1A	133	
13	11/12/2010 7:36	103	72	31	513-BKGDS1A	133	
14	11/12/2010 7:37	77	72	5	513-BKGDS1A	133	
15	11/12/2010 7:37	88	72	16	513-BKGDS1A	133	
16	11/12/2010 7:37	71	72	-1	513-BKGDS1A	133	
17	11/12/2010 7:37	70	72	-2	513-BKGDS1A	133	
18	11/12/2010 7:37	83	72	11	513-BKGDS1A	133	
19	11/12/2010 7:37	78	72	6	513-BKGDS1A	133	
20	11/12/2010 7:37	86	72	14	513-BKGDS1A	133	
21	11/12/2010 7:37	54	72	-18	513-BKGDS1A	133	
22	11/12/2010 7:37	82	72	10	513-BKGDS1A	133	
23	11/12/2010 7:38	80	72	8	513-BKGDS1A	133	
24	11/12/2010 7:38	80	72	8	513-BKGDS1A	133	
25	11/12/2010 7:38	83	72	11	513-BKGDS1A	133	
26	11/12/2010 7:38	55	72	-17	513-BKGDS1A	133	
27	11/12/2010 7:38	74	72	2	513-BKGDS1A	133	
28	11/12/2010 7:38	93	72	21	513-BKGDS1A	133	
29	11/12/2010 7:38	75	72	3	513-BKGDS1A	133	
30	11/12/2010 7:38	75	72	3	513-BKGDS1A	133	
31	11/12/2010 7:39	64	72	-8	513-BKGDS1A	133	
32	11/12/2010 7:39	90	72	18	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
33	11/12/2010 7:39	72	72	0	513-BKGDS1A	133	
34	11/12/2010 7:39	65	72	-7	513-BKGDS1A	133	
35	11/12/2010 7:39	85	72	13	513-BKGDS1A	133	
36	11/12/2010 7:39	72	72	0	513-BKGDS1A	133	
37	11/12/2010 7:39	66	72	-6	513-BKGDS1A	133	
38	11/12/2010 7:39	65	72	-7	513-BKGDS1A	133	
39	11/12/2010 7:39	68	72	-4	513-BKGDS1A	133	
40	11/12/2010 7:40	75	72	3	513-BKGDS1A	133	
41	11/12/2010 7:40	80	72	8	513-BKGDS1A	133	
42	11/12/2010 7:40	89	72	17	513-BKGDS1A	133	
43	11/12/2010 7:40	76	72	4	513-BKGDS1A	133	
44	11/12/2010 7:40	75	72	3	513-BKGDS1A	133	
45	11/12/2010 7:41	68	72	-4	513-BKGDS1A	133	
46	11/12/2010 7:41	104	72	32	513-BKGDS1A	133	
47	11/12/2010 7:41	61	72	-11	513-BKGDS1A	133	
48	11/12/2010 7:41	86	72	14	513-BKGDS1A	133	
49	11/12/2010 7:41	83	72	11	513-BKGDS1A	133	
50	11/12/2010 7:41	95	72	23	513-BKGDS1A	133	
51	11/12/2010 7:42	69	72	-3	513-BKGDS1A	133	
52	11/12/2010 7:42	57	72	-15	513-BKGDS1A	133	
53	11/12/2010 7:42	43	72	-29	513-BKGDS1A	133	
54	11/12/2010 7:42	44	72	-28	513-BKGDS1A	133	
55	11/12/2010 7:42	44	72	-28	513-BKGDS1A	133	
56	11/12/2010 7:42	59	72	-13	513-BKGDS1A	133	
57	11/12/2010 7:42	46	72	-26	513-BKGDS1A	133	
58	11/12/2010 7:42	63	72	-9	513-BKGDS1A	133	
59	11/12/2010 7:42	60	72	-12	513-BKGDS1A	133	
60	11/12/2010 7:43	75	72	3	513-BKGDS1A	133	
61	11/12/2010 7:43	70	72	-2	513-BKGDS1A	133	
62	11/12/2010 7:43	76	72	4	513-BKGDS1A	133	
63	11/12/2010 7:43	80	72	8	513-BKGDS1A	133	
64	11/12/2010 7:43	72	72	0	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
65	11/12/2010 7:43	101	72	29	513-BKGDS1A	133	
66	11/12/2010 7:43	92	72	20	513-BKGDS1A	133	
67	11/12/2010 7:43	99	72	27	513-BKGDS1A	133	
68	11/12/2010 7:44	108	72	36	513-BKGDS1A	133	
69	11/12/2010 7:44	76	72	4	513-BKGDS1A	133	
70	11/12/2010 7:44	66	72	-6	513-BKGDS1A	133	
71	11/12/2010 7:44	66	72	-6	513-BKGDS1A	133	
72	11/12/2010 7:44	71	72	-1	513-BKGDS1A	133	
73	11/12/2010 7:44	83	72	11	513-BKGDS1A	133	
74	11/12/2010 7:44	92	72	20	513-BKGDS1A	133	
75	11/12/2010 7:44	78	72	6	513-BKGDS1A	133	
76	11/12/2010 7:44	77	72	5	513-BKGDS1A	133	
77	11/12/2010 7:45	71	72	-1	513-BKGDS1A	133	
78	11/12/2010 7:45	76	72	4	513-BKGDS1A	133	
79	11/12/2010 7:45	132	72	60	513-BKGDS1A	133	
80	11/12/2010 7:45	93	72	21	513-BKGDS1A	133	
81	11/12/2010 7:45	66	72	-6	513-BKGDS1A	133	
82	11/12/2010 7:45	57	72	-15	513-BKGDS1A	133	
83	11/12/2010 7:45	70	72	-2	513-BKGDS1A	133	
84	11/12/2010 7:45	63	72	-9	513-BKGDS1A	133	
85	11/12/2010 7:46	46	72	-26	513-BKGDS1A	133	
86	11/12/2010 7:46	66	72	-6	513-BKGDS1A	133	
87	11/12/2010 7:46	74	72	2	513-BKGDS1A	133	
88	11/12/2010 7:47	77	72	5	513-BKGDS1A	133	
89	11/12/2010 7:47	110	72	38	513-BKGDS1A	133	
90	11/12/2010 7:47	81	72	9	513-BKGDS1A	133	
91	11/12/2010 7:47	69	72	-3	513-BKGDS1A	133	
92	11/12/2010 7:47	60	72	-12	513-BKGDS1A	133	
93	11/12/2010 7:47	85	72	13	513-BKGDS1A	133	
94	11/12/2010 7:48	81	72	9	513-BKGDS1A	133	
95	11/12/2010 7:48	81	72	9	513-BKGDS1A	133	
96	11/12/2010 7:48	80	72	8	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
97	11/12/2010 7:48	118	72	46	513-BKGDS1A	133	
98	11/12/2010 7:48	114	72	42	513-BKGDS1A	133	
99	11/12/2010 7:48	86	72	14	513-BKGDS1A	133	
100	11/12/2010 7:48	120	72	48	513-BKGDS1A	133	
101	11/12/2010 7:48	96	72	24	513-BKGDS1A	133	
102	11/12/2010 7:48	96	72	24	513-BKGDS1A	133	
103	11/12/2010 7:49	121	72	49	513-BKGDS1A	133	
104	11/12/2010 7:49	81	72	9	513-BKGDS1A	133	
105	11/12/2010 7:49	103	72	31	513-BKGDS1A	133	
106	11/12/2010 7:49	86	72	14	513-BKGDS1A	133	
107	11/12/2010 7:49	96	72	24	513-BKGDS1A	133	
108	11/12/2010 7:49	82	72	10	513-BKGDS1A	133	
109	11/12/2010 7:49	66	72	-6	513-BKGDS1A	133	
110	11/12/2010 7:49	67	72	-5	513-BKGDS1A	133	
111	11/12/2010 7:50	63	72	-9	513-BKGDS1A	133	
112	11/12/2010 7:50	46	72	-26	513-BKGDS1A	133	
113	11/12/2010 7:50	71	72	-1	513-BKGDS1A	133	
114	11/12/2010 7:50	83	72	11	513-BKGDS1A	133	
115	11/12/2010 7:50	92	72	20	513-BKGDS1A	133	
116	11/12/2010 7:50	86	72	14	513-BKGDS1A	133	
117	11/12/2010 7:50	89	72	17	513-BKGDS1A	133	
118	11/12/2010 7:50	97	72	25	513-BKGDS1A	133	
119	11/12/2010 7:50	77	72	5	513-BKGDS1A	133	
120	11/12/2010 7:51	54	72	-18	513-BKGDS1A	133	
121	11/12/2010 7:51	43	72	-29	513-BKGDS1A	133	
122	11/12/2010 7:51	60	72	-12	513-BKGDS1A	133	
123	11/12/2010 7:51	65	72	-7	513-BKGDS1A	133	
124	11/12/2010 7:51	52	72	-20	513-BKGDS1A	133	
125	11/12/2010 7:51	60	72	-12	513-BKGDS1A	133	
126	11/12/2010 7:51	57	72	-15	513-BKGDS1A	133	
127	11/12/2010 7:51	58	72	-14	513-BKGDS1A	133	
128	11/12/2010 7:52	56	72	-16	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
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Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
129	11/12/2010 7:52	63	72	-9	513-BKGDS1A	133	
130	11/12/2010 7:53	43	72	-29	513-BKGDS1A	133	
131	11/12/2010 7:53	66	72	-6	513-BKGDS1A	133	
132	11/12/2010 7:53	68	72	-4	513-BKGDS1A	133	
133	11/12/2010 7:54	65	72	-7	513-BKGDS1A	133	
134	11/12/2010 7:54	86	72	14	513-BKGDS1A	133	
135	11/12/2010 7:54	70	72	-2	513-BKGDS1A	133	
136	11/12/2010 7:54	69	72	-3	513-BKGDS1A	133	
137	11/12/2010 7:54	79	72	7	513-BKGDS1A	133	
138	11/12/2010 7:54	60	72	-12	513-BKGDS1A	133	
139	11/12/2010 7:54	69	72	-3	513-BKGDS1A	133	
140	11/12/2010 7:55	57	72	-15	513-BKGDS1A	133	
141	11/12/2010 7:55	65	72	-7	513-BKGDS1A	133	
142	11/12/2010 7:55	53	72	-19	513-BKGDS1A	133	
143	11/12/2010 7:55	61	72	-11	513-BKGDS1A	133	
144	11/12/2010 7:55	56	72	-16	513-BKGDS1A	133	
145	11/12/2010 7:55	55	72	-17	513-BKGDS1A	133	
146	11/12/2010 7:55	47	72	-25	513-BKGDS1A	133	
147	11/12/2010 7:55	75	72	3	513-BKGDS1A	133	
148	11/12/2010 7:56	102	72	30	513-BKGDS1A	133	
149	11/12/2010 7:56	93	72	21	513-BKGDS1A	133	
150	11/12/2010 7:56	86	72	14	513-BKGDS1A	133	
151	11/12/2010 7:56	101	72	29	513-BKGDS1A	133	
152	11/12/2010 7:56	88	72	16	513-BKGDS1A	133	
153	11/12/2010 7:56	66	72	-6	513-BKGDS1A	133	
154	11/12/2010 7:56	72	72	0	513-BKGDS1A	133	
155	11/12/2010 7:56	91	72	19	513-BKGDS1A	133	
156	11/12/2010 7:56	86	72	14	513-BKGDS1A	133	
157	11/12/2010 7:57	65	72	-7	513-BKGDS1A	133	
158	11/12/2010 7:57	78	72	6	513-BKGDS1A	133	
159	11/12/2010 7:57	99	72	27	513-BKGDS1A	133	
160	11/12/2010 7:57	66	72	-6	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
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Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
161	11/12/2010 7:57	60	72	-12	513-BKGD51A	133	
162	11/12/2010 7:57	73	72	1	513-BKGD51A	133	
163	11/12/2010 7:57	88	72	16	513-BKGD51A	133	
164	11/12/2010 7:57	79	72	7	513-BKGD51A	133	
165	11/12/2010 7:58	68	72	-4	513-BKGD51A	133	
166	11/12/2010 7:58	53	72	-19	513-BKGD51A	133	
167	11/12/2010 7:58	65	72	-7	513-BKGD51A	133	
168	11/12/2010 7:58	85	72	13	513-BKGD51A	133	
169	11/12/2010 7:58	84	72	12	513-BKGD51A	133	
170	11/12/2010 7:58	79	72	7	513-BKGD51A	133	
171	11/12/2010 7:59	76	72	4	513-BKGD51A	133	
172	11/12/2010 7:59	79	72	7	513-BKGD51A	133	
173	11/12/2010 7:59	89	72	17	513-BKGD51A	133	
174	11/12/2010 8:00	107	72	35	513-BKGD51A	133	
175	11/12/2010 8:00	87	72	15	513-BKGD51A	133	
176	11/12/2010 8:00	64	72	-8	513-BKGD51A	133	
177	11/12/2010 8:00	55	72	-17	513-BKGD51A	133	
178	11/12/2010 8:00	75	72	3	513-BKGD51A	133	
179	11/12/2010 8:00	48	72	-24	513-BKGD51A	133	
180	11/12/2010 8:00	48	72	-24	513-BKGD51A	133	
181	11/12/2010 8:00	58	72	-14	513-BKGD51A	133	
182	11/12/2010 8:00	58	72	-14	513-BKGD51A	133	
183	11/12/2010 8:01	78	72	6	513-BKGD51A	133	
184	11/12/2010 8:01	63	72	-9	513-BKGD51A	133	
185	11/12/2010 8:01	88	72	16	513-BKGD51A	133	
186	11/12/2010 8:01	104	72	32	513-BKGD51A	133	
187	11/12/2010 8:01	101	72	29	513-BKGD51A	133	
188	11/12/2010 8:01	120	72	48	513-BKGD51A	133	
189	11/12/2010 8:01	92	72	20	513-BKGD51A	133	
190	11/12/2010 8:01	74	72	2	513-BKGD51A	133	
191	11/12/2010 8:02	64	72	-8	513-BKGD51A	133	
192	11/12/2010 8:02	65	72	-7	513-BKGD51A	133	



TETRA TECH EC, INC.
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Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
193	11/12/2010 8:02	94	72	22	513-BKGDS1A	133	
194	11/12/2010 8:02	92	72	20	513-BKGDS1A	133	
195	11/12/2010 8:02	77	72	5	513-BKGDS1A	133	
196	11/12/2010 8:02	88	72	16	513-BKGDS1A	133	
197	11/12/2010 8:02	62	72	-10	513-BKGDS1A	133	
198	11/12/2010 8:02	56	72	-16	513-BKGDS1A	133	
199	11/12/2010 8:02	75	72	3	513-BKGDS1A	133	
200	11/12/2010 8:03	104	72	32	513-BKGDS1A	133	
201	11/12/2010 8:03	73	72	1	513-BKGDS1A	133	
202	11/12/2010 8:03	71	72	-1	513-BKGDS1A	133	
203	11/12/2010 8:03	75	72	3	513-BKGDS1A	133	
204	11/12/2010 8:03	75	72	3	513-BKGDS1A	133	
205	11/12/2010 8:03	67	72	-5	513-BKGDS1A	133	
206	11/12/2010 8:03	56	72	-16	513-BKGDS1A	133	
207	11/12/2010 8:03	59	72	-13	513-BKGDS1A	133	
208	11/12/2010 8:04	60	72	-12	513-BKGDS1A	133	
209	11/12/2010 8:04	83	72	11	513-BKGDS1A	133	
210	11/12/2010 8:04	71	72	-1	513-BKGDS1A	133	
211	11/12/2010 8:04	91	72	19	513-BKGDS1A	133	
212	11/12/2010 8:05	82	72	10	513-BKGDS1A	133	
213	11/12/2010 8:05	86	72	14	513-BKGDS1A	133	
214	11/12/2010 8:05	89	72	17	513-BKGDS1A	133	
215	11/12/2010 8:05	92	72	20	513-BKGDS1A	133	
216	11/12/2010 8:05	87	72	15	513-BKGDS1A	133	
217	11/12/2010 8:05	88	72	16	513-BKGDS1A	133	
218	11/12/2010 8:05	65	72	-7	513-BKGDS1A	133	
219	11/12/2010 8:06	49	72	-23	513-BKGDS1A	133	
220	11/12/2010 8:06	51	72	-21	513-BKGDS1A	133	
221	11/12/2010 8:06	46	72	-26	513-BKGDS1A	133	
222	11/12/2010 8:06	68	72	-4	513-BKGDS1A	133	
223	11/12/2010 8:06	54	72	-18	513-BKGDS1A	133	
224	11/12/2010 8:06	66	72	-6	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
225	11/12/2010 8:06	64	72	-8	513-BKGDS1A	133	
226	11/12/2010 8:06	78	72	6	513-BKGDS1A	133	
227	11/12/2010 8:07	97	72	25	513-BKGDS1A	133	
228	11/12/2010 8:07	95	72	23	513-BKGDS1A	133	
229	11/12/2010 8:07	64	72	-8	513-BKGDS1A	133	
230	11/12/2010 8:07	99	72	27	513-BKGDS1A	133	
231	11/12/2010 8:07	79	72	7	513-BKGDS1A	133	
232	11/12/2010 8:07	68	72	-4	513-BKGDS1A	133	
233	11/12/2010 8:07	60	72	-12	513-BKGDS1A	133	
234	11/12/2010 8:07	72	72	0	513-BKGDS1A	133	
235	11/12/2010 8:07	51	72	-21	513-BKGDS1A	133	
236	11/12/2010 8:08	83	72	11	513-BKGDS1A	133	
237	11/12/2010 8:08	66	72	-6	513-BKGDS1A	133	
238	11/12/2010 8:08	65	72	-7	513-BKGDS1A	133	
239	11/12/2010 8:08	79	72	7	513-BKGDS1A	133	
240	11/12/2010 8:08	108	72	36	513-BKGDS1A	133	
241	11/12/2010 8:08	126	72	54	513-BKGDS1A	133	
242	11/12/2010 8:08	133	72	61	513-BKGDS1A	133	
243	11/12/2010 8:08	114	72	42	513-BKGDS1A	133	
244	11/12/2010 8:08	132	72	60	513-BKGDS1A	133	
245	11/12/2010 8:09	98	72	26	513-BKGDS1A	133	
246	11/12/2010 8:09	94	72	22	513-BKGDS1A	133	
247	11/12/2010 8:09	124	72	52	513-BKGDS1A	133	
248	11/12/2010 8:09	108	72	36	513-BKGDS1A	133	
249	11/12/2010 8:09	91	72	19	513-BKGDS1A	133	
250	11/12/2010 8:09	90	72	18	513-BKGDS1A	133	
251	11/12/2010 8:09	77	72	5	513-BKGDS1A	133	
252	11/12/2010 8:12	52	72	-20	513-BKGDS1A	133	
253	11/12/2010 8:12	52	72	-20	513-BKGDS1A	133	
254	11/12/2010 8:12	61	72	-11	513-BKGDS1A	133	
255	11/12/2010 8:12	86	72	14	513-BKGDS1A	133	
256	11/12/2010 8:13	62	72	-10	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
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Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
257	11/12/2010 8:13	96	72	24	513-BKGDS1A	133	
258	11/12/2010 8:13	84	72	12	513-BKGDS1A	133	
259	11/12/2010 8:13	67	72	-5	513-BKGDS1A	133	
260	11/12/2010 8:13	79	72	7	513-BKGDS1A	133	
261	11/12/2010 8:13	74	72	2	513-BKGDS1A	133	
262	11/12/2010 8:13	87	72	15	513-BKGDS1A	133	
263	11/12/2010 8:13	89	72	17	513-BKGDS1A	133	
264	11/12/2010 8:14	78	72	6	513-BKGDS1A	133	
265	11/12/2010 8:14	94	72	22	513-BKGDS1A	133	
266	11/12/2010 8:14	98	72	26	513-BKGDS1A	133	
267	11/12/2010 8:14	84	72	12	513-BKGDS1A	133	
268	11/12/2010 8:14	87	72	15	513-BKGDS1A	133	
269	11/12/2010 8:14	68	72	-4	513-BKGDS1A	133	
270	11/12/2010 8:14	59	72	-13	513-BKGDS1A	133	
271	11/12/2010 8:14	64	72	-8	513-BKGDS1A	133	
272	11/12/2010 8:14	66	72	-6	513-BKGDS1A	133	
273	11/12/2010 8:15	65	72	-7	513-BKGDS1A	133	
274	11/12/2010 8:15	86	72	14	513-BKGDS1A	133	
275	11/12/2010 8:15	71	72	-1	513-BKGDS1A	133	
276	11/12/2010 8:15	53	72	-19	513-BKGDS1A	133	
277	11/12/2010 8:15	58	72	-14	513-BKGDS1A	133	
278	11/12/2010 8:15	59	72	-13	513-BKGDS1A	133	
279	11/12/2010 8:15	83	72	11	513-BKGDS1A	133	
280	11/12/2010 8:15	59	72	-13	513-BKGDS1A	133	
281	11/12/2010 8:16	62	72	-10	513-BKGDS1A	133	
282	11/12/2010 8:16	73	72	1	513-BKGDS1A	133	
283	11/12/2010 8:16	45	72	-27	513-BKGDS1A	133	
284	11/12/2010 8:16	48	72	-24	513-BKGDS1A	133	
285	11/12/2010 8:16	63	72	-9	513-BKGDS1A	133	
286	11/12/2010 8:16	76	72	4	513-BKGDS1A	133	
287	11/12/2010 8:16	60	72	-12	513-BKGDS1A	133	
288	11/12/2010 8:16	87	72	15	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
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Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
289	11/12/2010 8:16	77	72	5	513-BKGDS1A	133	
290	11/12/2010 8:17	71	72	-1	513-BKGDS1A	133	
291	11/12/2010 8:18	87	72	15	513-BKGDS1A	133	
292	11/12/2010 8:18	75	72	3	513-BKGDS1A	133	
293	11/12/2010 8:18	54	72	-18	513-BKGDS1A	133	
294	11/12/2010 8:18	50	72	-22	513-BKGDS1A	133	
295	11/12/2010 8:19	49	72	-23	513-BKGDS1A	133	
296	11/12/2010 8:19	65	72	-7	513-BKGDS1A	133	
297	11/12/2010 8:19	45	72	-27	513-BKGDS1A	133	
298	11/12/2010 8:19	50	72	-22	513-BKGDS1A	133	
299	11/12/2010 8:19	91	72	19	513-BKGDS1A	133	
300	11/12/2010 8:19	128	72	56	513-BKGDS1A	133	
301	11/12/2010 8:19	114	72	42	513-BKGDS1A	133	
302	11/12/2010 8:19	87	72	15	513-BKGDS1A	133	
303	11/12/2010 8:19	54	72	-18	513-BKGDS1A	133	
304	11/12/2010 8:20	80	72	8	513-BKGDS1A	133	
305	11/12/2010 8:20	127	72	55	513-BKGDS1A	133	
306	11/12/2010 8:20	104	72	32	513-BKGDS1A	133	
307	11/12/2010 8:20	106	72	34	513-BKGDS1A	133	
308	11/12/2010 8:20	82	72	10	513-BKGDS1A	133	
309	11/12/2010 8:20	75	72	3	513-BKGDS1A	133	
310	11/12/2010 8:20	80	72	8	513-BKGDS1A	133	
311	11/12/2010 8:20	84	72	12	513-BKGDS1A	133	
312	11/12/2010 8:20	84	72	12	513-BKGDS1A	133	
313	11/12/2010 8:21	86	72	14	513-BKGDS1A	133	
314	11/12/2010 8:21	72	72	0	513-BKGDS1A	133	
315	11/12/2010 8:21	57	72	-15	513-BKGDS1A	133	
316	11/12/2010 8:21	60	72	-12	513-BKGDS1A	133	
317	11/12/2010 8:21	70	72	-2	513-BKGDS1A	133	
318	11/12/2010 8:21	53	72	-19	513-BKGDS1A	133	
319	11/12/2010 8:21	69	72	-3	513-BKGDS1A	133	
320	11/12/2010 8:21	94	72	22	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
321	11/12/2010 8:22	93	72	21	513-BKGDS1A	133	
322	11/12/2010 8:22	103	72	31	513-BKGDS1A	133	
323	11/12/2010 8:22	131	72	59	513-BKGDS1A	133	
324	11/12/2010 8:22	123	72	51	513-BKGDS1A	133	
325	11/12/2010 8:22	66	72	-6	513-BKGDS1A	133	
326	11/12/2010 8:22	61	72	-11	513-BKGDS1A	133	
327	11/12/2010 8:22	52	72	-20	513-BKGDS1A	133	
328	11/12/2010 8:22	60	72	-12	513-BKGDS1A	133	
329	11/12/2010 8:23	83	72	11	513-BKGDS1A	133	
330	11/12/2010 8:23	82	72	10	513-BKGDS1A	133	
331	11/12/2010 8:23	80	72	8	513-BKGDS1A	133	
332	11/12/2010 8:23	67	72	-5	513-BKGDS1A	133	
333	11/12/2010 8:23	64	72	-8	513-BKGDS1A	133	
334	11/12/2010 8:23	81	72	9	513-BKGDS1A	133	
335	11/12/2010 8:24	104	72	32	513-BKGDS1A	133	
336	11/12/2010 8:24	107	72	35	513-BKGDS1A	133	
337	11/12/2010 8:24	88	72	16	513-BKGDS1A	133	
338	11/12/2010 8:24	86	72	14	513-BKGDS1A	133	
339	11/12/2010 8:24	93	72	21	513-BKGDS1A	133	
340	11/12/2010 8:24	95	72	23	513-BKGDS1A	133	
341	11/12/2010 8:24	102	72	30	513-BKGDS1A	133	
342	11/12/2010 8:24	64	72	-8	513-BKGDS1A	133	
343	11/12/2010 8:25	76	72	4	513-BKGDS1A	133	
344	11/12/2010 8:25	72	72	0	513-BKGDS1A	133	
345	11/12/2010 8:25	53	72	-19	513-BKGDS1A	133	
346	11/12/2010 8:25	62	72	-10	513-BKGDS1A	133	
347	11/12/2010 8:25	50	72	-22	513-BKGDS1A	133	
348	11/12/2010 8:25	72	72	0	513-BKGDS1A	133	
349	11/12/2010 8:25	86	72	14	513-BKGDS1A	133	
350	11/12/2010 8:25	67	72	-5	513-BKGDS1A	133	
351	11/12/2010 8:25	76	72	4	513-BKGDS1A	133	
352	11/12/2010 8:26	85	72	13	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
353	11/12/2010 8:26	72	72	0	513-BKGDS1A	133	
354	11/12/2010 8:26	72	72	0	513-BKGDS1A	133	
355	11/12/2010 8:26	74	72	2	513-BKGDS1A	133	
356	11/12/2010 8:26	71	72	-1	513-BKGDS1A	133	
357	11/12/2010 8:26	60	72	-12	513-BKGDS1A	133	
358	11/12/2010 8:26	47	72	-25	513-BKGDS1A	133	
359	11/12/2010 8:26	61	72	-11	513-BKGDS1A	133	
360	11/12/2010 8:27	66	72	-6	513-BKGDS1A	133	
361	11/12/2010 8:27	82	72	10	513-BKGDS1A	133	
362	11/12/2010 8:27	54	72	-18	513-BKGDS1A	133	
363	11/12/2010 8:27	43	72	-29	513-BKGDS1A	133	
364	11/12/2010 8:27	42	72	-30	513-BKGDS1A	133	
365	11/12/2010 8:27	61	72	-11	513-BKGDS1A	133	
366	11/12/2010 8:28	56	72	-16	513-BKGDS1A	133	
367	11/12/2010 8:28	46	72	-26	513-BKGDS1A	133	
368	11/12/2010 8:28	57	72	-15	513-BKGDS1A	133	
369	11/12/2010 8:28	77	72	5	513-BKGDS1A	133	
370	11/12/2010 8:28	60	72	-12	513-BKGDS1A	133	
371	11/12/2010 8:29	65	72	-7	513-BKGDS1A	133	
372	11/12/2010 8:29	78	72	6	513-BKGDS1A	133	
373	11/12/2010 8:29	46	72	-26	513-BKGDS1A	133	
374	11/12/2010 8:29	44	72	-28	513-BKGDS1A	133	
375	11/12/2010 8:29	63	72	-9	513-BKGDS1A	133	
376	11/12/2010 8:29	59	72	-13	513-BKGDS1A	133	
377	11/12/2010 8:29	49	72	-23	513-BKGDS1A	133	
378	11/12/2010 8:29	51	72	-21	513-BKGDS1A	133	
379	11/12/2010 8:30	67	72	-5	513-BKGDS1A	133	
380	11/12/2010 8:30	58	72	-14	513-BKGDS1A	133	
381	11/12/2010 8:30	52	72	-20	513-BKGDS1A	133	
382	11/12/2010 8:30	57	72	-15	513-BKGDS1A	133	
383	11/12/2010 8:30	51	72	-21	513-BKGDS1A	133	
384	11/12/2010 8:30	57	72	-15	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
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Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
385	11/12/2010 8:30	60	72	-12	513-BKGDS1A	133	
386	11/12/2010 8:30	58	72	-14	513-BKGDS1A	133	
387	11/12/2010 8:30	69	72	-3	513-BKGDS1A	133	
388	11/12/2010 8:31	67	72	-5	513-BKGDS1A	133	
389	11/12/2010 8:31	68	72	-4	513-BKGDS1A	133	
390	11/12/2010 8:31	103	72	31	513-BKGDS1A	133	
391	11/12/2010 8:31	86	72	14	513-BKGDS1A	133	
392	11/12/2010 8:31	81	72	9	513-BKGDS1A	133	
393	11/12/2010 8:31	73	72	1	513-BKGDS1A	133	
394	11/12/2010 8:31	44	72	-28	513-BKGDS1A	133	
395	11/12/2010 8:31	72	72	0	513-BKGDS1A	133	
396	11/12/2010 8:32	64	72	-8	513-BKGDS1A	133	
397	11/12/2010 8:32	96	72	24	513-BKGDS1A	133	
398	11/12/2010 8:32	94	72	22	513-BKGDS1A	133	
399	11/12/2010 8:32	76	72	4	513-BKGDS1A	133	
400	11/12/2010 8:32	113	72	41	513-BKGDS1A	133	
401	11/12/2010 8:32	93	72	21	513-BKGDS1A	133	
402	11/12/2010 8:32	110	72	38	513-BKGDS1A	133	
403	11/12/2010 8:32	106	72	34	513-BKGDS1A	133	
404	11/12/2010 8:32	92	72	20	513-BKGDS1A	133	
405	11/12/2010 8:33	66	72	-6	513-BKGDS1A	133	
406	11/12/2010 8:33	82	72	10	513-BKGDS1A	133	
407	11/12/2010 8:33	81	72	9	513-BKGDS1A	133	
408	11/12/2010 8:33	81	72	9	513-BKGDS1A	133	
409	11/12/2010 8:33	71	72	-1	513-BKGDS1A	133	
410	11/12/2010 8:33	59	72	-13	513-BKGDS1A	133	
411	11/12/2010 8:33	65	72	-7	513-BKGDS1A	133	
412	11/12/2010 8:34	75	72	3	513-BKGDS1A	133	
413	11/12/2010 8:34	66	72	-6	513-BKGDS1A	133	
414	11/12/2010 8:34	74	72	2	513-BKGDS1A	133	
415	11/12/2010 8:34	62	72	-10	513-BKGDS1A	133	
416	11/12/2010 8:34	70	72	-2	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
417	11/12/2010 8:34	74	72	2	513-BKGDS1A	133	
418	11/12/2010 8:34	86	72	14	513-BKGDS1A	133	
419	11/12/2010 8:34	97	72	25	513-BKGDS1A	133	
420	11/12/2010 8:35	80	72	8	513-BKGDS1A	133	
421	11/12/2010 8:35	87	72	15	513-BKGDS1A	133	
422	11/12/2010 8:35	112	72	40	513-BKGDS1A	133	
423	11/12/2010 8:35	92	72	20	513-BKGDS1A	133	
424	11/12/2010 8:35	79	72	7	513-BKGDS1A	133	
425	11/12/2010 8:35	94	72	22	513-BKGDS1A	133	
426	11/12/2010 8:35	70	72	-2	513-BKGDS1A	133	
427	11/12/2010 8:35	89	72	17	513-BKGDS1A	133	
428	11/12/2010 8:35	120	72	48	513-BKGDS1A	133	
429	11/12/2010 8:36	99	72	27	513-BKGDS1A	133	
430	11/12/2010 8:36	94	72	22	513-BKGDS1A	133	
431	11/12/2010 8:36	93	72	21	513-BKGDS1A	133	
432	11/12/2010 8:36	68	72	-4	513-BKGDS1A	133	
433	11/12/2010 8:36	53	72	-19	513-BKGDS1A	133	
434	11/12/2010 8:36	43	72	-29	513-BKGDS1A	133	
435	11/12/2010 8:36	51	72	-21	513-BKGDS1A	133	
436	11/12/2010 8:36	59	72	-13	513-BKGDS1A	133	
437	11/12/2010 8:37	58	72	-14	513-BKGDS1A	133	
438	11/12/2010 8:37	73	72	1	513-BKGDS1A	133	
439	11/12/2010 8:37	83	72	11	513-BKGDS1A	133	
440	11/12/2010 8:37	87	72	15	513-BKGDS1A	133	
441	11/12/2010 8:37	92	72	20	513-BKGDS1A	133	
442	11/12/2010 8:37	66	72	-6	513-BKGDS1A	133	
443	11/12/2010 8:37	84	72	12	513-BKGDS1A	133	
444	11/12/2010 8:37	72	72	0	513-BKGDS1A	133	
445	11/12/2010 9:19	82	72	10	513-BKGDS1A	133	
446	11/12/2010 9:19	80	72	8	513-BKGDS1A	133	
447	11/12/2010 9:19	50	72	-22	513-BKGDS1A	133	
448	11/12/2010 9:19	46	72	-26	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
449	11/12/2010 9:19	53	72	-19	513-BKGDS1A	133	
450	11/12/2010 9:19	53	72	-19	513-BKGDS1A	133	
451	11/12/2010 9:19	68	72	-4	513-BKGDS1A	133	
452	11/12/2010 9:20	47	72	-25	513-BKGDS1A	133	
453	11/12/2010 9:20	74	72	2	513-BKGDS1A	133	
454	11/12/2010 9:20	61	72	-11	513-BKGDS1A	133	
455	11/12/2010 9:20	62	72	-10	513-BKGDS1A	133	
456	11/12/2010 9:20	50	72	-22	513-BKGDS1A	133	
457	11/12/2010 9:20	80	72	8	513-BKGDS1A	133	
458	11/12/2010 9:20	59	72	-13	513-BKGDS1A	133	
459	11/12/2010 9:20	53	72	-19	513-BKGDS1A	133	
460	11/12/2010 9:20	52	72	-20	513-BKGDS1A	133	
461	11/12/2010 9:21	95	72	23	513-BKGDS1A	133	
462	11/12/2010 9:21	109	72	37	513-BKGDS1A	133	
463	11/12/2010 9:21	71	72	-1	513-BKGDS1A	133	
464	11/12/2010 9:21	68	72	-4	513-BKGDS1A	133	
465	11/12/2010 9:21	75	72	3	513-BKGDS1A	133	
466	11/12/2010 9:21	95	72	23	513-BKGDS1A	133	
467	11/12/2010 9:21	87	72	15	513-BKGDS1A	133	
468	11/12/2010 9:21	80	72	8	513-BKGDS1A	133	
469	11/12/2010 9:21	68	72	-4	513-BKGDS1A	133	
470	11/12/2010 9:22	75	72	3	513-BKGDS1A	133	
471	11/12/2010 9:22	57	72	-15	513-BKGDS1A	133	
472	11/12/2010 9:22	62	72	-10	513-BKGDS1A	133	
473	11/12/2010 9:22	56	72	-16	513-BKGDS1A	133	
474	11/12/2010 9:22	48	72	-24	513-BKGDS1A	133	
475	11/12/2010 9:22	74	72	2	513-BKGDS1A	133	
476	11/12/2010 9:22	81	72	9	513-BKGDS1A	133	
477	11/12/2010 9:22	89	72	17	513-BKGDS1A	133	
478	11/12/2010 9:23	66	72	-6	513-BKGDS1A	133	
479	11/12/2010 9:24	82	72	10	513-BKGDS1A	133	
480	11/12/2010 9:24	84	72	12	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
481	11/12/2010 9:24	87	72	15	513-BKGDS1A	133	
482	11/12/2010 9:25	70	72	-2	513-BKGDS1A	133	
483	11/12/2010 9:25	68	72	-4	513-BKGDS1A	133	
484	11/12/2010 9:25	77	72	5	513-BKGDS1A	133	
485	11/12/2010 9:25	59	72	-13	513-BKGDS1A	133	
486	11/12/2010 9:25	53	72	-19	513-BKGDS1A	133	
487	11/12/2010 9:25	111	72	39	513-BKGDS1A	133	
488	11/12/2010 9:25	84	72	12	513-BKGDS1A	133	
489	11/12/2010 9:25	74	72	2	513-BKGDS1A	133	
490	11/12/2010 9:26	83	72	11	513-BKGDS1A	133	
491	11/12/2010 9:26	72	72	0	513-BKGDS1A	133	
492	11/12/2010 9:26	68	72	-4	513-BKGDS1A	133	
493	11/12/2010 9:26	63	72	-9	513-BKGDS1A	133	
494	11/12/2010 9:26	89	72	17	513-BKGDS1A	133	
495	11/12/2010 9:26	74	72	2	513-BKGDS1A	133	
496	11/12/2010 9:26	88	72	16	513-BKGDS1A	133	
497	11/12/2010 9:26	79	72	7	513-BKGDS1A	133	
498	11/12/2010 9:26	89	72	17	513-BKGDS1A	133	
499	11/12/2010 9:27	74	72	2	513-BKGDS1A	133	
500	11/12/2010 9:27	73	72	1	513-BKGDS1A	133	
501	11/12/2010 9:27	67	72	-5	513-BKGDS1A	133	
502	11/12/2010 9:27	77	72	5	513-BKGDS1A	133	
503	11/12/2010 9:27	72	72	0	513-BKGDS1A	133	
504	11/12/2010 9:27	59	72	-13	513-BKGDS1A	133	
505	11/12/2010 9:27	43	72	-29	513-BKGDS1A	133	
506	11/12/2010 9:27	55	72	-17	513-BKGDS1A	133	
507	11/12/2010 9:27	59	72	-13	513-BKGDS1A	133	
508	11/12/2010 9:28	52	72	-20	513-BKGDS1A	133	
509	11/12/2010 9:28	66	72	-6	513-BKGDS1A	133	
510	11/12/2010 9:28	88	72	16	513-BKGDS1A	133	
511	11/12/2010 9:28	53	72	-19	513-BKGDS1A	133	
512	11/12/2010 9:28	57	72	-15	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
513	11/12/2010 9:29	79	72	7	513-BKGDS1A	133	
514	11/12/2010 9:29	65	72	-7	513-BKGDS1A	133	
515	11/12/2010 9:29	54	72	-18	513-BKGDS1A	133	
516	11/12/2010 9:29	82	72	10	513-BKGDS1A	133	
517	11/12/2010 9:29	79	72	7	513-BKGDS1A	133	
518	11/12/2010 9:29	66	72	-6	513-BKGDS1A	133	
519	11/12/2010 9:29	82	72	10	513-BKGDS1A	133	
520	11/12/2010 9:29	56	72	-16	513-BKGDS1A	133	
521	11/12/2010 9:30	76	72	4	513-BKGDS1A	133	
522	11/12/2010 9:30	64	72	-8	513-BKGDS1A	133	
523	11/12/2010 9:30	90	72	18	513-BKGDS1A	133	
524	11/12/2010 9:30	58	72	-14	513-BKGDS1A	133	
525	11/12/2010 9:30	79	72	7	513-BKGDS1A	133	
526	11/12/2010 9:30	62	72	-10	513-BKGDS1A	133	
527	11/12/2010 9:30	64	72	-8	513-BKGDS1A	133	
528	11/12/2010 9:30	87	72	15	513-BKGDS1A	133	
529	11/12/2010 9:30	56	72	-16	513-BKGDS1A	133	
530	11/12/2010 9:31	93	72	21	513-BKGDS1A	133	
531	11/12/2010 9:31	75	72	3	513-BKGDS1A	133	
532	11/12/2010 9:31	74	72	2	513-BKGDS1A	133	
533	11/12/2010 9:31	104	72	32	513-BKGDS1A	133	
534	11/12/2010 9:31	104	72	32	513-BKGDS1A	133	
535	11/12/2010 9:31	88	72	16	513-BKGDS1A	133	
536	11/12/2010 9:31	90	72	18	513-BKGDS1A	133	
537	11/12/2010 9:31	79	72	7	513-BKGDS1A	133	
538	11/12/2010 9:31	73	72	1	513-BKGDS1A	133	
539	11/12/2010 9:32	77	72	5	513-BKGDS1A	133	
540	11/12/2010 9:32	60	72	-12	513-BKGDS1A	133	
541	11/12/2010 9:32	94	72	22	513-BKGDS1A	133	
542	11/12/2010 9:32	83	72	11	513-BKGDS1A	133	
543	11/12/2010 9:32	79	72	7	513-BKGDS1A	133	
544	11/12/2010 9:32	90	72	18	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
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Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
545	11/12/2010 9:32	59	72	-13	513-BKGDS1A	133	
546	11/12/2010 9:33	90	72	18	513-BKGDS1A	133	
547	11/12/2010 9:33	101	72	29	513-BKGDS1A	133	
548	11/12/2010 9:33	126	72	54	513-BKGDS1A	133	
549	11/12/2010 9:33	116	72	44	513-BKGDS1A	133	
550	11/12/2010 9:33	107	72	35	513-BKGDS1A	133	
551	11/12/2010 9:34	86	72	14	513-BKGDS1A	133	
552	11/12/2010 9:34	91	72	19	513-BKGDS1A	133	
553	11/12/2010 9:34	66	72	-6	513-BKGDS1A	133	
554	11/12/2010 9:34	87	72	15	513-BKGDS1A	133	
555	11/12/2010 9:34	83	72	11	513-BKGDS1A	133	
556	11/12/2010 9:34	96	72	24	513-BKGDS1A	133	
557	11/12/2010 9:34	85	72	13	513-BKGDS1A	133	
558	11/12/2010 9:34	72	72	0	513-BKGDS1A	133	
559	11/12/2010 9:34	72	72	0	513-BKGDS1A	133	
560	11/12/2010 9:35	76	72	4	513-BKGDS1A	133	
561	11/12/2010 9:35	54	72	-18	513-BKGDS1A	133	
562	11/12/2010 9:35	52	72	-20	513-BKGDS1A	133	
563	11/12/2010 9:35	52	72	-20	513-BKGDS1A	133	
564	11/12/2010 9:35	69	72	-3	513-BKGDS1A	133	
565	11/12/2010 9:35	79	72	7	513-BKGDS1A	133	
566	11/12/2010 9:35	76	72	4	513-BKGDS1A	133	
567	11/12/2010 9:35	54	72	-18	513-BKGDS1A	133	
568	11/12/2010 9:35	70	72	-2	513-BKGDS1A	133	
569	11/12/2010 9:36	68	72	-4	513-BKGDS1A	133	
570	11/12/2010 9:36	46	72	-26	513-BKGDS1A	133	
571	11/12/2010 9:36	55	72	-17	513-BKGDS1A	133	
572	11/12/2010 9:36	61	72	-11	513-BKGDS1A	133	
573	11/12/2010 9:36	67	72	-5	513-BKGDS1A	133	
574	11/12/2010 9:36	62	72	-10	513-BKGDS1A	133	
575	11/12/2010 9:36	64	72	-8	513-BKGDS1A	133	
576	11/12/2010 9:36	60	72	-12	513-BKGDS1A	133	



TETRA TECH EC, INC.
 Hunters Point Shipyard
 San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
577	11/12/2010 9:37	72	72	0	513-BKGDS1A	133	
578	11/12/2010 9:37	65	72	-7	513-BKGDS1A	133	
579	11/12/2010 9:37	70	72	-2	513-BKGDS1A	133	
580	11/12/2010 9:37	63	72	-9	513-BKGDS1A	133	
581	11/12/2010 9:37	54	72	-18	513-BKGDS1A	133	
582	11/12/2010 9:38	64	72	-8	513-BKGDS1A	133	
583	11/12/2010 9:38	63	72	-9	513-BKGDS1A	133	
584	11/12/2010 9:38	73	72	1	513-BKGDS1A	133	
585	11/12/2010 9:38	53	72	-19	513-BKGDS1A	133	
586	11/12/2010 9:38	56	72	-16	513-BKGDS1A	133	
587	11/12/2010 9:38	61	72	-11	513-BKGDS1A	133	
588	11/12/2010 9:38	45	72	-27	513-BKGDS1A	133	
589	11/12/2010 9:38	47	72	-25	513-BKGDS1A	133	
590	11/12/2010 9:38	51	72	-21	513-BKGDS1A	133	
591	11/12/2010 9:39	78	72	6	513-BKGDS1A	133	
592	11/12/2010 9:39	79	72	7	513-BKGDS1A	133	
593	11/12/2010 9:39	86	72	14	513-BKGDS1A	133	
594	11/12/2010 9:39	53	72	-19	513-BKGDS1A	133	
595	11/12/2010 9:39	50	72	-22	513-BKGDS1A	133	
596	11/12/2010 9:39	56	72	-16	513-BKGDS1A	133	
597	11/12/2010 9:39	59	72	-13	513-BKGDS1A	133	
598	11/12/2010 9:39	51	72	-21	513-BKGDS1A	133	
599	11/12/2010 9:40	73	72	1	513-BKGDS1A	133	
600	11/12/2010 9:40	103	72	31	513-BKGDS1A	133	
601	11/12/2010 9:40	79	72	7	513-BKGDS1A	133	
602	11/12/2010 9:40	69	72	-3	513-BKGDS1A	133	
603	11/12/2010 9:40	92	72	20	513-BKGDS1A	133	
604	11/12/2010 9:40	76	72	4	513-BKGDS1A	133	
605	11/12/2010 9:40	98	72	26	513-BKGDS1A	133	
606	11/12/2010 9:40	54	72	-18	513-BKGDS1A	133	
607	11/12/2010 9:40	56	72	-16	513-BKGDS1A	133	
608	11/12/2010 9:41	66	72	-6	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
609	11/12/2010 9:41	82	72	10	513-BKGDS1A	133	
610	11/12/2010 9:41	83	72	11	513-BKGDS1A	133	
611	11/12/2010 9:42	69	72	-3	513-BKGDS1A	133	
612	11/12/2010 9:42	65	72	-7	513-BKGDS1A	133	
613	11/12/2010 9:42	71	72	-1	513-BKGDS1A	133	
614	11/12/2010 9:42	75	72	3	513-BKGDS1A	133	
615	11/12/2010 9:42	61	72	-11	513-BKGDS1A	133	
616	11/12/2010 9:42	59	72	-13	513-BKGDS1A	133	
617	11/12/2010 9:42	72	72	0	513-BKGDS1A	133	
618	11/12/2010 9:42	92	72	20	513-BKGDS1A	133	
619	11/12/2010 9:42	72	72	0	513-BKGDS1A	133	
620	11/12/2010 9:43	66	72	-6	513-BKGDS1A	133	
621	11/12/2010 9:43	73	72	1	513-BKGDS1A	133	
622	11/12/2010 9:43	56	72	-16	513-BKGDS1A	133	
623	11/12/2010 9:43	48	72	-24	513-BKGDS1A	133	
624	11/12/2010 9:43	59	72	-13	513-BKGDS1A	133	
625	11/12/2010 9:43	51	72	-21	513-BKGDS1A	133	
626	11/12/2010 9:43	57	72	-15	513-BKGDS1A	133	
627	11/12/2010 9:43	102	72	30	513-BKGDS1A	133	
628	11/12/2010 9:44	86	72	14	513-BKGDS1A	133	
629	11/12/2010 9:44	84	72	12	513-BKGDS1A	133	
630	11/12/2010 9:44	62	72	-10	513-BKGDS1A	133	
631	11/12/2010 9:44	56	72	-16	513-BKGDS1A	133	
632	11/12/2010 9:44	56	72	-16	513-BKGDS1A	133	
633	11/12/2010 9:44	58	72	-14	513-BKGDS1A	133	
634	11/12/2010 9:44	55	72	-17	513-BKGDS1A	133	
635	11/12/2010 9:44	59	72	-13	513-BKGDS1A	133	
636	11/12/2010 9:44	69	72	-3	513-BKGDS1A	133	
637	11/12/2010 9:45	64	72	-8	513-BKGDS1A	133	
638	11/12/2010 9:45	54	72	-18	513-BKGDS1A	133	
639	11/12/2010 9:45	69	72	-3	513-BKGDS1A	133	
640	11/12/2010 9:46	56	72	-16	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
641	11/12/2010 9:46	90	72	18	513-BKGDS1A	133	
642	11/12/2010 9:46	63	72	-9	513-BKGDS1A	133	
643	11/12/2010 9:46	69	72	-3	513-BKGDS1A	133	
644	11/12/2010 9:46	70	72	-2	513-BKGDS1A	133	
645	11/12/2010 9:46	58	72	-14	513-BKGDS1A	133	
646	11/12/2010 9:46	48	72	-24	513-BKGDS1A	133	
647	11/12/2010 9:46	46	72	-26	513-BKGDS1A	133	
648	11/12/2010 9:47	59	72	-13	513-BKGDS1A	133	
649	11/12/2010 9:47	54	72	-18	513-BKGDS1A	133	
650	11/12/2010 9:47	89	72	17	513-BKGDS1A	133	
651	11/12/2010 9:47	74	72	2	513-BKGDS1A	133	
652	11/12/2010 9:47	50	72	-22	513-BKGDS1A	133	
653	11/12/2010 9:47	58	72	-14	513-BKGDS1A	133	
654	11/12/2010 9:47	83	72	11	513-BKGDS1A	133	
655	11/12/2010 9:47	75	72	3	513-BKGDS1A	133	
656	11/12/2010 9:47	69	72	-3	513-BKGDS1A	133	
657	11/12/2010 9:48	75	72	3	513-BKGDS1A	133	
658	11/12/2010 9:48	65	72	-7	513-BKGDS1A	133	
659	11/12/2010 9:48	105	72	33	513-BKGDS1A	133	
660	11/12/2010 9:48	100	72	28	513-BKGDS1A	133	
661	11/12/2010 9:48	84	72	12	513-BKGDS1A	133	
662	11/12/2010 9:48	107	72	35	513-BKGDS1A	133	
663	11/12/2010 9:48	98	72	26	513-BKGDS1A	133	
664	11/12/2010 9:48	73	72	1	513-BKGDS1A	133	
665	11/12/2010 9:49	75	72	3	513-BKGDS1A	133	
666	11/12/2010 9:49	75	72	3	513-BKGDS1A	133	
667	11/12/2010 9:49	118	72	46	513-BKGDS1A	133	
668	11/12/2010 9:49	95	72	23	513-BKGDS1A	133	
669	11/12/2010 9:49	56	72	-16	513-BKGDS1A	133	
670	11/12/2010 9:50	81	72	9	513-BKGDS1A	133	
671	11/12/2010 9:50	75	72	3	513-BKGDS1A	133	
672	11/12/2010 9:50	62	72	-10	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
673	11/12/2010 9:50	58	72	-14	513-BKGDS1A	133	
674	11/12/2010 9:50	59	72	-13	513-BKGDS1A	133	
675	11/12/2010 9:50	89	72	17	513-BKGDS1A	133	
676	11/12/2010 9:51	86	72	14	513-BKGDS1A	133	
677	11/12/2010 9:51	113	72	41	513-BKGDS1A	133	
678	11/12/2010 9:51	109	72	37	513-BKGDS1A	133	
679	11/12/2010 9:51	115	72	43	513-BKGDS1A	133	
680	11/12/2010 9:51	97	72	25	513-BKGDS1A	133	
681	11/12/2010 9:51	84	72	12	513-BKGDS1A	133	
682	11/12/2010 9:51	80	72	8	513-BKGDS1A	133	
683	11/12/2010 9:51	82	72	10	513-BKGDS1A	133	
684	11/12/2010 9:52	88	72	16	513-BKGDS1A	133	
685	11/12/2010 9:52	60	72	-12	513-BKGDS1A	133	
686	11/12/2010 9:52	53	72	-19	513-BKGDS1A	133	
687	11/12/2010 9:52	46	72	-26	513-BKGDS1A	133	
688	11/12/2010 9:52	64	72	-8	513-BKGDS1A	133	
689	11/12/2010 9:52	68	72	-4	513-BKGDS1A	133	
690	11/12/2010 9:52	84	72	12	513-BKGDS1A	133	
691	11/12/2010 9:52	54	72	-18	513-BKGDS1A	133	
692	11/12/2010 9:52	64	72	-8	513-BKGDS1A	133	
693	11/12/2010 9:53	52	72	-20	513-BKGDS1A	133	
694	11/12/2010 9:53	59	72	-13	513-BKGDS1A	133	
695	11/12/2010 9:53	49	72	-23	513-BKGDS1A	133	
696	11/12/2010 9:53	48	72	-24	513-BKGDS1A	133	
697	11/12/2010 9:53	57	72	-15	513-BKGDS1A	133	
698	11/12/2010 9:53	70	72	-2	513-BKGDS1A	133	
699	11/12/2010 9:54	84	72	12	513-BKGDS1A	133	
700	11/12/2010 9:54	86	72	14	513-BKGDS1A	133	
701	11/12/2010 9:55	64	72	-8	513-BKGDS1A	133	
702	11/12/2010 9:55	73	72	1	513-BKGDS1A	133	
703	11/12/2010 9:55	115	72	43	513-BKGDS1A	133	
704	11/12/2010 9:55	89	72	17	513-BKGDS1A	133	



TETRATECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
705	11/12/2010 9:55	86	72	14	513-BKGDS1A	133	
706	11/12/2010 9:55	79	72	7	513-BKGDS1A	133	
707	11/12/2010 9:55	92	72	20	513-BKGDS1A	133	
708	11/12/2010 9:55	104	72	32	513-BKGDS1A	133	
709	11/12/2010 9:56	106	72	34	513-BKGDS1A	133	
710	11/12/2010 9:56	100	72	28	513-BKGDS1A	133	
711	11/12/2010 9:56	91	72	19	513-BKGDS1A	133	
712	11/12/2010 9:56	98	72	26	513-BKGDS1A	133	
713	11/12/2010 9:56	95	72	23	513-BKGDS1A	133	
714	11/12/2010 9:56	130	72	58	513-BKGDS1A	133	
715	11/12/2010 9:56	101	72	29	513-BKGDS1A	133	
716	11/12/2010 9:56	98	72	26	513-BKGDS1A	133	
717	11/12/2010 9:56	72	72	0	513-BKGDS1A	133	
718	11/12/2010 9:57	92	72	20	513-BKGDS1A	133	
719	11/12/2010 9:57	99	72	27	513-BKGDS1A	133	
720	11/12/2010 9:57	87	72	15	513-BKGDS1A	133	
721	11/12/2010 9:57	65	72	-7	513-BKGDS1A	133	
722	11/12/2010 9:57	114	72	42	513-BKGDS1A	133	
723	11/12/2010 9:57	99	72	27	513-BKGDS1A	133	
724	11/12/2010 9:57	76	72	4	513-BKGDS1A	133	
725	11/12/2010 9:57	72	72	0	513-BKGDS1A	133	
726	11/12/2010 9:57	76	72	4	513-BKGDS1A	133	
727	11/12/2010 9:59	102	72	30	513-BKGDS1A	133	
728	11/12/2010 9:59	110	72	38	513-BKGDS1A	133	
729	11/12/2010 10:00	79	72	7	513-BKGDS1A	133	
730	11/12/2010 10:00	92	72	20	513-BKGDS1A	133	
731	11/12/2010 10:00	112	72	40	513-BKGDS1A	133	
732	11/12/2010 10:00	84	72	12	513-BKGDS1A	133	
733	11/12/2010 10:00	98	72	26	513-BKGDS1A	133	
734	11/12/2010 10:00	76	72	4	513-BKGDS1A	133	
735	11/12/2010 10:00	62	72	-10	513-BKGDS1A	133	
736	11/12/2010 10:00	66	72	-6	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
737	11/12/2010 10:00	61	72	-11	513-BKGD51A	133	
738	11/12/2010 10:01	100	72	28	513-BKGD51A	133	
739	11/12/2010 10:01	89	72	17	513-BKGD51A	133	
740	11/12/2010 10:01	52	72	-20	513-BKGD51A	133	
741	11/12/2010 10:01	64	72	-8	513-BKGD51A	133	
742	11/12/2010 10:01	56	72	-16	513-BKGD51A	133	
743	11/12/2010 10:01	85	72	13	513-BKGD51A	133	
744	11/12/2010 10:01	71	72	-1	513-BKGD51A	133	
745	11/12/2010 10:01	69	72	-3	513-BKGD51A	133	
746	11/12/2010 10:02	88	72	16	513-BKGD51A	133	
747	11/12/2010 10:02	72	72	0	513-BKGD51A	133	
748	11/12/2010 10:02	47	72	-25	513-BKGD51A	133	
749	11/12/2010 10:02	75	72	3	513-BKGD51A	133	
750	11/12/2010 10:02	57	72	-15	513-BKGD51A	133	
751	11/12/2010 10:02	59	72	-13	513-BKGD51A	133	
752	11/12/2010 10:02	100	72	28	513-BKGD51A	133	
753	11/12/2010 10:02	91	72	19	513-BKGD51A	133	
754	11/12/2010 10:02	79	72	7	513-BKGD51A	133	
755	11/12/2010 10:03	64	72	-8	513-BKGD51A	133	
756	11/12/2010 10:03	56	72	-16	513-BKGD51A	133	
757	11/12/2010 10:04	96	72	24	513-BKGD51A	133	
758	11/12/2010 10:04	95	72	23	513-BKGD51A	133	
759	11/12/2010 10:04	73	72	1	513-BKGD51A	133	
760	11/12/2010 10:04	58	72	-14	513-BKGD51A	133	
761	11/12/2010 10:04	75	72	3	513-BKGD51A	133	
762	11/12/2010 10:04	69	72	-3	513-BKGD51A	133	
763	11/12/2010 10:04	66	72	-6	513-BKGD51A	133	
764	11/12/2010 10:04	48	72	-24	513-BKGD51A	133	
765	11/12/2010 10:04	83	72	11	513-BKGD51A	133	
766	11/12/2010 10:05	131	72	59	513-BKGD51A	133	
767	11/12/2010 10:05	114	72	42	513-BKGD51A	133	
768	11/12/2010 10:05	99	72	27	513-BKGD51A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
769	11/12/2010 10:05	89	72	17	513-BKGDS1A	133	
770	11/12/2010 10:05	73	72	1	513-BKGDS1A	133	
771	11/12/2010 10:05	67	72	-5	513-BKGDS1A	133	
772	11/12/2010 10:05	62	72	-10	513-BKGDS1A	133	
773	11/12/2010 10:05	73	72	1	513-BKGDS1A	133	
774	11/12/2010 10:05	59	72	-13	513-BKGDS1A	133	
775	11/12/2010 10:06	69	72	-3	513-BKGDS1A	133	
776	11/12/2010 10:06	60	72	-12	513-BKGDS1A	133	
777	11/12/2010 10:06	53	72	-19	513-BKGDS1A	133	
778	11/12/2010 10:06	79	72	7	513-BKGDS1A	133	
779	11/12/2010 10:06	71	72	-1	513-BKGDS1A	133	
780	11/12/2010 10:06	54	72	-18	513-BKGDS1A	133	
781	11/12/2010 10:06	54	72	-18	513-BKGDS1A	133	
782	11/12/2010 10:06	81	72	9	513-BKGDS1A	133	
783	11/12/2010 10:07	61	72	-11	513-BKGDS1A	133	
784	11/12/2010 10:07	74	72	2	513-BKGDS1A	133	
785	11/12/2010 10:08	54	72	-18	513-BKGDS1A	133	
786	11/12/2010 10:08	86	72	14	513-BKGDS1A	133	
787	11/12/2010 10:08	83	72	11	513-BKGDS1A	133	
788	11/12/2010 10:08	67	72	-5	513-BKGDS1A	133	
789	11/12/2010 10:08	82	72	10	513-BKGDS1A	133	
790	11/12/2010 10:08	70	72	-2	513-BKGDS1A	133	
791	11/12/2010 10:08	100	72	28	513-BKGDS1A	133	
792	11/12/2010 10:08	96	72	24	513-BKGDS1A	133	
793	11/12/2010 10:08	73	72	1	513-BKGDS1A	133	
794	11/12/2010 10:09	68	72	-4	513-BKGDS1A	133	
795	11/12/2010 10:09	81	72	9	513-BKGDS1A	133	
796	11/12/2010 10:09	85	72	13	513-BKGDS1A	133	
797	11/12/2010 10:09	67	72	-5	513-BKGDS1A	133	
798	11/12/2010 10:09	60	72	-12	513-BKGDS1A	133	
799	11/12/2010 10:09	63	72	-9	513-BKGDS1A	133	
800	11/12/2010 10:09	54	72	-18	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
801	11/12/2010 10:09	66	72	-6	513-BKGDS1A	133	
802	11/12/2010 10:10	48	72	-24	513-BKGDS1A	133	
803	11/12/2010 10:10	49	72	-23	513-BKGDS1A	133	
804	11/12/2010 10:10	54	72	-18	513-BKGDS1A	133	
805	11/12/2010 10:10	69	72	-3	513-BKGDS1A	133	
806	11/12/2010 10:10	60	72	-12	513-BKGDS1A	133	
807	11/12/2010 10:10	68	72	-4	513-BKGDS1A	133	
808	11/12/2010 10:10	85	72	13	513-BKGDS1A	133	
809	11/12/2010 10:11	69	72	-3	513-BKGDS1A	133	
810	11/12/2010 10:11	77	72	5	513-BKGDS1A	133	
811	11/12/2010 10:11	75	72	3	513-BKGDS1A	133	
812	11/12/2010 10:11	92	72	20	513-BKGDS1A	133	
813	11/12/2010 10:11	107	72	35	513-BKGDS1A	133	
814	11/12/2010 10:11	75	72	3	513-BKGDS1A	133	
815	11/12/2010 10:12	85	72	13	513-BKGDS1A	133	
816	11/12/2010 10:12	62	72	-10	513-BKGDS1A	133	
817	11/12/2010 10:12	73	72	1	513-BKGDS1A	133	
818	11/12/2010 10:12	72	72	0	513-BKGDS1A	133	
819	11/12/2010 10:12	79	72	7	513-BKGDS1A	133	
820	11/12/2010 10:12	97	72	25	513-BKGDS1A	133	
821	11/12/2010 10:12	129	72	57	513-BKGDS1A	133	
822	11/12/2010 10:12	99	72	27	513-BKGDS1A	133	
823	11/12/2010 10:12	87	72	15	513-BKGDS1A	133	
824	11/12/2010 10:13	79	72	7	513-BKGDS1A	133	
825	11/12/2010 10:13	90	72	18	513-BKGDS1A	133	
826	11/12/2010 10:13	76	72	4	513-BKGDS1A	133	
827	11/12/2010 10:13	82	72	10	513-BKGDS1A	133	
828	11/12/2010 10:13	73	72	1	513-BKGDS1A	133	
829	11/12/2010 10:13	53	72	-19	513-BKGDS1A	133	
830	11/12/2010 10:13	55	72	-17	513-BKGDS1A	133	
831	11/12/2010 10:13	74	72	2	513-BKGDS1A	133	
832	11/12/2010 10:14	75	72	3	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
833	11/12/2010 10:14	67	72	-5	513-BKGDS1A	133	
834	11/12/2010 10:14	74	72	2	513-BKGDS1A	133	
835	11/12/2010 10:15	59	72	-13	513-BKGDS1A	133	
836	11/12/2010 10:15	85	72	13	513-BKGDS1A	133	
837	11/12/2010 10:15	58	72	-14	513-BKGDS1A	133	
838	11/12/2010 10:15	70	72	-2	513-BKGDS1A	133	
839	11/12/2010 10:15	62	72	-10	513-BKGDS1A	133	
840	11/12/2010 10:15	63	72	-9	513-BKGDS1A	133	
841	11/12/2010 10:15	55	72	-17	513-BKGDS1A	133	
842	11/12/2010 10:15	43	72	-29	513-BKGDS1A	133	
843	11/12/2010 10:15	51	72	-21	513-BKGDS1A	133	
844	11/12/2010 10:16	61	72	-11	513-BKGDS1A	133	
845	11/12/2010 10:16	86	72	14	513-BKGDS1A	133	
846	11/12/2010 10:16	87	72	15	513-BKGDS1A	133	
847	11/12/2010 10:16	68	72	-4	513-BKGDS1A	133	
848	11/12/2010 10:16	65	72	-7	513-BKGDS1A	133	
849	11/12/2010 10:16	47	72	-25	513-BKGDS1A	133	
850	11/12/2010 10:16	62	72	-10	513-BKGDS1A	133	
851	11/12/2010 10:16	70	72	-2	513-BKGDS1A	133	
852	11/12/2010 10:17	69	72	-3	513-BKGDS1A	133	
853	11/12/2010 10:17	65	72	-7	513-BKGDS1A	133	
854	11/12/2010 10:17	55	72	-17	513-BKGDS1A	133	
855	11/12/2010 10:17	71	72	-1	513-BKGDS1A	133	
856	11/12/2010 10:17	66	72	-6	513-BKGDS1A	133	
857	11/12/2010 10:17	50	72	-22	513-BKGDS1A	133	
858	11/12/2010 10:17	54	72	-18	513-BKGDS1A	133	
859	11/12/2010 10:50	53	72	-19	513-BKGDS1A	133	
860	11/12/2010 10:50	66	72	-6	513-BKGDS1A	133	
861	11/12/2010 10:50	82	72	10	513-BKGDS1A	133	
862	11/12/2010 10:50	73	72	1	513-BKGDS1A	133	
863	11/12/2010 10:50	88	72	16	513-BKGDS1A	133	
864	11/12/2010 10:50	67	72	-5	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
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Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
865	11/12/2010 10:50	69	72	-3	513-BKGDS1A	133	
866	11/12/2010 10:51	67	72	-5	513-BKGDS1A	133	
867	11/12/2010 10:51	95	72	23	513-BKGDS1A	133	
868	11/12/2010 10:51	61	72	-11	513-BKGDS1A	133	
869	11/12/2010 10:51	83	72	11	513-BKGDS1A	133	
870	11/12/2010 10:51	61	72	-11	513-BKGDS1A	133	
871	11/12/2010 10:51	48	72	-24	513-BKGDS1A	133	
872	11/12/2010 10:51	57	72	-15	513-BKGDS1A	133	
873	11/12/2010 10:51	63	72	-9	513-BKGDS1A	133	
874	11/12/2010 10:51	67	72	-5	513-BKGDS1A	133	
875	11/12/2010 10:52	75	72	3	513-BKGDS1A	133	
876	11/12/2010 10:52	91	72	19	513-BKGDS1A	133	
877	11/12/2010 10:52	100	72	28	513-BKGDS1A	133	
878	11/12/2010 10:52	90	72	18	513-BKGDS1A	133	
879	11/12/2010 10:52	77	72	5	513-BKGDS1A	133	
880	11/12/2010 10:52	79	72	7	513-BKGDS1A	133	
881	11/12/2010 10:52	66	72	-6	513-BKGDS1A	133	
882	11/12/2010 10:52	62	72	-10	513-BKGDS1A	133	
883	11/12/2010 10:53	65	72	-7	513-BKGDS1A	133	
884	11/12/2010 10:54	96	72	24	513-BKGDS1A	133	
885	11/12/2010 10:54	87	72	15	513-BKGDS1A	133	
886	11/12/2010 10:54	62	72	-10	513-BKGDS1A	133	
887	11/12/2010 10:54	64	72	-8	513-BKGDS1A	133	
888	11/12/2010 10:54	89	72	17	513-BKGDS1A	133	
889	11/12/2010 10:54	99	72	27	513-BKGDS1A	133	
890	11/12/2010 10:54	69	72	-3	513-BKGDS1A	133	
891	11/12/2010 10:55	64	72	-8	513-BKGDS1A	133	
892	11/12/2010 10:55	56	72	-16	513-BKGDS1A	133	
893	11/12/2010 10:55	53	72	-19	513-BKGDS1A	133	
894	11/12/2010 10:55	67	72	-5	513-BKGDS1A	133	
895	11/12/2010 10:55	82	72	10	513-BKGDS1A	133	
896	11/12/2010 10:55	68	72	-4	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
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Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
897	11/12/2010 10:55	91	72	19	513-BKGDS1A	133	
898	11/12/2010 10:55	77	72	5	513-BKGDS1A	133	
899	11/12/2010 10:55	63	72	-9	513-BKGDS1A	133	
900	11/12/2010 10:56	52	72	-20	513-BKGDS1A	133	
901	11/12/2010 10:56	60	72	-12	513-BKGDS1A	133	
902	11/12/2010 10:56	53	72	-19	513-BKGDS1A	133	
903	11/12/2010 10:56	55	72	-17	513-BKGDS1A	133	
904	11/12/2010 10:56	48	72	-24	513-BKGDS1A	133	
905	11/12/2010 10:56	61	72	-11	513-BKGDS1A	133	
906	11/12/2010 10:56	64	72	-8	513-BKGDS1A	133	
907	11/12/2010 10:57	52	72	-20	513-BKGDS1A	133	
908	11/12/2010 10:58	64	72	-8	513-BKGDS1A	133	
909	11/12/2010 10:58	75	72	3	513-BKGDS1A	133	
910	11/12/2010 10:58	54	72	-18	513-BKGDS1A	133	
911	11/12/2010 10:58	61	72	-11	513-BKGDS1A	133	
912	11/12/2010 10:58	56	72	-16	513-BKGDS1A	133	
913	11/12/2010 10:58	55	72	-17	513-BKGDS1A	133	
914	11/12/2010 10:58	46	72	-26	513-BKGDS1A	133	
915	11/12/2010 10:58	54	72	-18	513-BKGDS1A	133	
916	11/12/2010 10:58	104	72	32	513-BKGDS1A	133	
917	11/12/2010 10:59	81	72	9	513-BKGDS1A	133	
918	11/12/2010 10:59	85	72	13	513-BKGDS1A	133	
919	11/12/2010 10:59	65	72	-7	513-BKGDS1A	133	
920	11/12/2010 10:59	65	72	-7	513-BKGDS1A	133	
921	11/12/2010 10:59	65	72	-7	513-BKGDS1A	133	
922	11/12/2010 10:59	75	72	3	513-BKGDS1A	133	
923	11/12/2010 10:59	67	72	-5	513-BKGDS1A	133	
924	11/12/2010 10:59	82	72	10	513-BKGDS1A	133	
925	11/12/2010 10:59	81	72	9	513-BKGDS1A	133	
926	11/12/2010 11:00	60	72	-12	513-BKGDS1A	133	
927	11/12/2010 11:00	61	72	-11	513-BKGDS1A	133	
928	11/12/2010 11:00	68	72	-4	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
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Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
929	11/12/2010 11:01	84	72	12	513-BKGDS1A	133	
930	11/12/2010 11:01	79	72	7	513-BKGDS1A	133	
931	11/12/2010 11:01	98	72	26	513-BKGDS1A	133	
932	11/12/2010 11:01	87	72	15	513-BKGDS1A	133	
933	11/12/2010 11:01	76	72	4	513-BKGDS1A	133	
934	11/12/2010 11:01	57	72	-15	513-BKGDS1A	133	
935	11/12/2010 11:01	54	72	-18	513-BKGDS1A	133	
936	11/12/2010 11:01	64	72	-8	513-BKGDS1A	133	
937	11/12/2010 11:02	48	72	-24	513-BKGDS1A	133	
938	11/12/2010 11:02	56	72	-16	513-BKGDS1A	133	
939	11/12/2010 11:02	79	72	7	513-BKGDS1A	133	
940	11/12/2010 11:02	79	72	7	513-BKGDS1A	133	
941	11/12/2010 11:02	64	72	-8	513-BKGDS1A	133	
942	11/12/2010 11:02	77	72	5	513-BKGDS1A	133	
943	11/12/2010 11:02	81	72	9	513-BKGDS1A	133	
944	11/12/2010 11:02	68	72	-4	513-BKGDS1A	133	
945	11/12/2010 11:02	73	72	1	513-BKGDS1A	133	
946	11/12/2010 11:03	68	72	-4	513-BKGDS1A	133	
947	11/12/2010 11:03	68	72	-4	513-BKGDS1A	133	
948	11/12/2010 11:03	80	72	8	513-BKGDS1A	133	
949	11/12/2010 11:03	48	72	-24	513-BKGDS1A	133	
950	11/12/2010 11:03	56	72	-16	513-BKGDS1A	133	
951	11/12/2010 11:04	67	72	-5	513-BKGDS1A	133	
952	11/12/2010 11:04	92	72	20	513-BKGDS1A	133	
953	11/12/2010 11:04	80	72	8	513-BKGDS1A	133	
954	11/12/2010 11:04	90	72	18	513-BKGDS1A	133	
955	11/12/2010 11:05	83	72	11	513-BKGDS1A	133	
956	11/12/2010 11:05	69	72	-3	513-BKGDS1A	133	
957	11/12/2010 11:05	63	72	-9	513-BKGDS1A	133	
958	11/12/2010 11:05	54	72	-18	513-BKGDS1A	133	
959	11/12/2010 11:05	78	72	6	513-BKGDS1A	133	
960	11/12/2010 11:05	94	72	22	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
961	11/12/2010 11:05	79	72	7	513-BKGDS1A	133	
962	11/12/2010 11:05	76	72	4	513-BKGDS1A	133	
963	11/12/2010 11:05	115	72	43	513-BKGDS1A	133	
964	11/12/2010 11:06	103	72	31	513-BKGDS1A	133	
965	11/12/2010 11:06	129	72	57	513-BKGDS1A	133	
966	11/12/2010 11:06	105	72	33	513-BKGDS1A	133	
967	11/12/2010 11:06	91	72	19	513-BKGDS1A	133	
968	11/12/2010 11:06	101	72	29	513-BKGDS1A	133	
969	11/12/2010 11:06	121	72	49	513-BKGDS1A	133	
970	11/12/2010 11:06	102	72	30	513-BKGDS1A	133	
971	11/12/2010 11:06	78	72	6	513-BKGDS1A	133	
972	11/12/2010 11:07	48	72	-24	513-BKGDS1A	133	
973	11/12/2010 11:07	46	72	-26	513-BKGDS1A	133	
974	11/12/2010 11:07	49	72	-23	513-BKGDS1A	133	
975	11/12/2010 11:07	75	72	3	513-BKGDS1A	133	
976	11/12/2010 11:08	66	72	-6	513-BKGDS1A	133	
977	11/12/2010 11:08	64	72	-8	513-BKGDS1A	133	
978	11/12/2010 11:08	64	72	-8	513-BKGDS1A	133	
979	11/12/2010 11:08	69	72	-3	513-BKGDS1A	133	
980	11/12/2010 11:08	71	72	-1	513-BKGDS1A	133	
981	11/12/2010 11:08	82	72	10	513-BKGDS1A	133	
982	11/12/2010 11:08	82	72	10	513-BKGDS1A	133	
983	11/12/2010 11:08	103	72	31	513-BKGDS1A	133	
984	11/12/2010 11:08	77	72	5	513-BKGDS1A	133	
985	11/12/2010 11:09	80	72	8	513-BKGDS1A	133	
986	11/12/2010 11:09	94	72	22	513-BKGDS1A	133	
987	11/12/2010 11:09	89	72	17	513-BKGDS1A	133	
988	11/12/2010 11:09	94	72	22	513-BKGDS1A	133	
989	11/12/2010 11:09	76	72	4	513-BKGDS1A	133	
990	11/12/2010 11:09	76	72	4	513-BKGDS1A	133	
991	11/12/2010 11:09	51	72	-21	513-BKGDS1A	133	
992	11/12/2010 11:10	47	72	-25	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
993	11/12/2010 11:10	52	72	-20	513-BKGDS1A	133	
994	11/12/2010 11:10	58	72	-14	513-BKGDS1A	133	
995	11/12/2010 11:10	89	72	17	513-BKGDS1A	133	
996	11/12/2010 11:10	72	72	0	513-BKGDS1A	133	
997	11/12/2010 11:10	69	72	-3	513-BKGDS1A	133	
998	11/12/2010 11:11	70	72	-2	513-BKGDS1A	133	
999	11/12/2010 11:11	76	72	4	513-BKGDS1A	133	
1000	11/12/2010 11:11	89	72	17	513-BKGDS1A	133	
1001	11/12/2010 11:11	82	72	10	513-BKGDS1A	133	
1002	11/12/2010 11:11	76	72	4	513-BKGDS1A	133	
1003	11/12/2010 11:11	72	72	0	513-BKGDS1A	133	
1004	11/12/2010 11:11	51	72	-21	513-BKGDS1A	133	
1005	11/12/2010 11:11	57	72	-15	513-BKGDS1A	133	
1006	11/12/2010 11:11	58	72	-14	513-BKGDS1A	133	
1007	11/12/2010 11:12	83	72	11	513-BKGDS1A	133	
1008	11/12/2010 11:12	75	72	3	513-BKGDS1A	133	
1009	11/12/2010 11:12	84	72	12	513-BKGDS1A	133	
1010	11/12/2010 11:12	99	72	27	513-BKGDS1A	133	
1011	11/12/2010 11:12	75	72	3	513-BKGDS1A	133	
1012	11/12/2010 11:13	86	72	14	513-BKGDS1A	133	
1013	11/12/2010 11:13	73	72	1	513-BKGDS1A	133	
1014	11/12/2010 11:13	80	72	8	513-BKGDS1A	133	
1015	11/12/2010 11:13	75	72	3	513-BKGDS1A	133	
1016	11/12/2010 11:13	68	72	-4	513-BKGDS1A	133	
1017	11/12/2010 11:14	62	72	-10	513-BKGDS1A	133	
1018	11/12/2010 11:14	75	72	3	513-BKGDS1A	133	
1019	11/12/2010 11:14	60	72	-12	513-BKGDS1A	133	
1020	11/12/2010 11:14	67	72	-5	513-BKGDS1A	133	
1021	11/12/2010 11:14	57	72	-15	513-BKGDS1A	133	
1022	11/12/2010 11:14	94	72	22	513-BKGDS1A	133	
1023	11/12/2010 11:14	76	72	4	513-BKGDS1A	133	
1024	11/12/2010 11:14	72	72	0	513-BKGDS1A	133	



TETRA TECH EC, INC.
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 San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1025	11/12/2010 11:14	56	72	-16	513-BKGDS1A	133	
1026	11/12/2010 11:15	49	72	-23	513-BKGDS1A	133	
1027	11/12/2010 11:15	51	72	-21	513-BKGDS1A	133	
1028	11/12/2010 11:15	71	72	-1	513-BKGDS1A	133	
1029	11/12/2010 11:15	74	72	2	513-BKGDS1A	133	
1030	11/12/2010 11:15	97	72	25	513-BKGDS1A	133	
1031	11/12/2010 11:16	71	72	-1	513-BKGDS1A	133	
1032	11/12/2010 11:16	80	72	8	513-BKGDS1A	133	
1033	11/12/2010 11:16	75	72	3	513-BKGDS1A	133	
1034	11/12/2010 11:16	58	72	-14	513-BKGDS1A	133	
1035	11/12/2010 11:16	54	72	-18	513-BKGDS1A	133	
1036	11/12/2010 11:16	53	72	-19	513-BKGDS1A	133	
1037	11/12/2010 11:16	60	72	-12	513-BKGDS1A	133	
1038	11/12/2010 11:16	72	72	0	513-BKGDS1A	133	
1039	11/12/2010 11:17	93	72	21	513-BKGDS1A	133	
1040	11/12/2010 11:17	60	72	-12	513-BKGDS1A	133	
1041	11/12/2010 11:17	83	72	11	513-BKGDS1A	133	
1042	11/12/2010 11:17	82	72	10	513-BKGDS1A	133	
1043	11/12/2010 11:17	83	72	11	513-BKGDS1A	133	
1044	11/12/2010 11:17	115	72	43	513-BKGDS1A	133	
1045	11/12/2010 11:17	90	72	18	513-BKGDS1A	133	
1046	11/12/2010 11:17	99	72	27	513-BKGDS1A	133	
1047	11/12/2010 11:17	74	72	2	513-BKGDS1A	133	
1048	11/12/2010 11:18	89	72	17	513-BKGDS1A	133	
1049	11/12/2010 11:18	66	72	-6	513-BKGDS1A	133	
1050	11/12/2010 11:18	65	72	-7	513-BKGDS1A	133	
1051	11/12/2010 11:19	93	72	21	513-BKGDS1A	133	
1052	11/12/2010 11:19	50	72	-22	513-BKGDS1A	133	
1053	11/12/2010 11:19	59	72	-13	513-BKGDS1A	133	
1054	11/12/2010 11:19	58	72	-14	513-BKGDS1A	133	
1055	11/12/2010 11:19	72	72	0	513-BKGDS1A	133	
1056	11/12/2010 11:19	107	72	35	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1057	11/12/2010 11:19	102	72	30	513-BKGDS1A	133	
1058	11/12/2010 11:19	94	72	22	513-BKGDS1A	133	
1059	11/12/2010 11:20	86	72	14	513-BKGDS1A	133	
1060	11/12/2010 11:20	82	72	10	513-BKGDS1A	133	
1061	11/12/2010 11:20	65	72	-7	513-BKGDS1A	133	
1062	11/12/2010 11:20	54	72	-18	513-BKGDS1A	133	
1063	11/12/2010 11:20	53	72	-19	513-BKGDS1A	133	
1064	11/12/2010 11:20	53	72	-19	513-BKGDS1A	133	
1065	11/12/2010 11:20	51	72	-21	513-BKGDS1A	133	
1066	11/12/2010 11:20	53	72	-19	513-BKGDS1A	133	
1067	11/12/2010 11:21	60	72	-12	513-BKGDS1A	133	
1068	11/12/2010 11:23	53	72	-19	513-BKGDS1A	133	
1069	11/12/2010 11:23	61	72	-11	513-BKGDS1A	133	
1070	11/12/2010 11:23	84	72	12	513-BKGDS1A	133	
1071	11/12/2010 11:23	93	72	21	513-BKGDS1A	133	
1072	11/12/2010 11:23	85	72	13	513-BKGDS1A	133	
1073	11/12/2010 11:23	82	72	10	513-BKGDS1A	133	
1074	11/12/2010 11:23	60	72	-12	513-BKGDS1A	133	
1075	11/12/2010 11:24	53	72	-19	513-BKGDS1A	133	
1076	11/12/2010 11:24	64	72	-8	513-BKGDS1A	133	
1077	11/12/2010 11:24	62	72	-10	513-BKGDS1A	133	
1078	11/12/2010 11:24	51	72	-21	513-BKGDS1A	133	
1079	11/12/2010 11:24	78	72	6	513-BKGDS1A	133	
1080	11/12/2010 11:24	61	72	-11	513-BKGDS1A	133	
1081	11/12/2010 11:24	65	72	-7	513-BKGDS1A	133	
1082	11/12/2010 11:24	60	72	-12	513-BKGDS1A	133	
1083	11/12/2010 11:25	86	72	14	513-BKGDS1A	133	
1084	11/12/2010 11:26	61	72	-11	513-BKGDS1A	133	
1085	11/12/2010 11:26	57	72	-15	513-BKGDS1A	133	
1086	11/12/2010 11:26	55	72	-17	513-BKGDS1A	133	
1087	11/12/2010 11:26	64	72	-8	513-BKGDS1A	133	
1088	11/12/2010 11:26	73	72	1	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1089	11/12/2010 11:26	57	72	-15	513-BKGDS1A	133	
1090	11/12/2010 11:26	51	72	-21	513-BKGDS1A	133	
1091	11/12/2010 11:26	68	72	-4	513-BKGDS1A	133	
1092	11/12/2010 11:26	91	72	19	513-BKGDS1A	133	
1093	11/12/2010 11:27	74	72	2	513-BKGDS1A	133	
1094	11/12/2010 11:27	65	72	-7	513-BKGDS1A	133	
1095	11/12/2010 11:27	91	72	19	513-BKGDS1A	133	
1096	11/12/2010 11:27	84	72	12	513-BKGDS1A	133	
1097	11/12/2010 11:27	109	72	37	513-BKGDS1A	133	
1098	11/12/2010 11:27	94	72	22	513-BKGDS1A	133	
1099	11/12/2010 11:29	71	72	-1	513-BKGDS1A	133	
1100	11/12/2010 11:29	48	72	-24	513-BKGDS1A	133	
1101	11/12/2010 11:29	47	72	-25	513-BKGDS1A	133	
1102	11/12/2010 11:29	47	72	-25	513-BKGDS1A	133	
1103	11/12/2010 11:29	46	72	-26	513-BKGDS1A	133	
1104	11/12/2010 11:29	60	72	-12	513-BKGDS1A	133	
1105	11/12/2010 11:29	77	72	5	513-BKGDS1A	133	
1106	11/12/2010 11:29	45	72	-27	513-BKGDS1A	133	
1107	11/12/2010 11:29	49	72	-23	513-BKGDS1A	133	
1108	11/12/2010 11:30	71	72	-1	513-BKGDS1A	133	
1109	11/12/2010 11:30	67	72	-5	513-BKGDS1A	133	
1110	11/12/2010 11:30	57	72	-15	513-BKGDS1A	133	
1111	11/12/2010 11:30	51	72	-21	513-BKGDS1A	133	
1112	11/12/2010 11:30	50	72	-22	513-BKGDS1A	133	
1113	11/12/2010 11:31	75	72	3	513-BKGDS1A	133	
1114	11/12/2010 11:31	68	72	-4	513-BKGDS1A	133	
1115	11/12/2010 11:31	81	72	9	513-BKGDS1A	133	
1116	11/12/2010 11:31	89	72	17	513-BKGDS1A	133	
1117	11/12/2010 11:31	95	72	23	513-BKGDS1A	133	
1118	11/12/2010 11:31	78	72	6	513-BKGDS1A	133	
1119	11/12/2010 11:31	57	72	-15	513-BKGDS1A	133	
1120	11/12/2010 11:32	72	72	0	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1121	11/12/2010 11:32	68	72	-4	513-BKGDS1A	133	
1122	11/12/2010 11:32	72	72	0	513-BKGDS1A	133	
1123	11/12/2010 11:32	79	72	7	513-BKGDS1A	133	
1124	11/12/2010 11:32	72	72	0	513-BKGDS1A	133	
1125	11/12/2010 11:32	68	72	-4	513-BKGDS1A	133	
1126	11/12/2010 11:32	59	72	-13	513-BKGDS1A	133	
1127	11/12/2010 11:33	52	72	-20	513-BKGDS1A	133	
1128	11/12/2010 11:33	49	72	-23	513-BKGDS1A	133	
1129	11/12/2010 11:33	58	72	-14	513-BKGDS1A	133	
1130	11/12/2010 11:33	57	72	-15	513-BKGDS1A	133	
1131	11/12/2010 11:33	80	72	8	513-BKGDS1A	133	
1132	11/12/2010 11:34	79	72	7	513-BKGDS1A	133	
1133	11/12/2010 11:34	55	72	-17	513-BKGDS1A	133	
1134	11/12/2010 11:34	56	72	-16	513-BKGDS1A	133	
1135	11/12/2010 11:34	64	72	-8	513-BKGDS1A	133	
1136	11/12/2010 11:34	66	72	-6	513-BKGDS1A	133	
1137	11/12/2010 11:34	82	72	10	513-BKGDS1A	133	
1138	11/12/2010 11:34	72	72	0	513-BKGDS1A	133	
1139	11/12/2010 11:34	96	72	24	513-BKGDS1A	133	
1140	11/12/2010 11:35	82	72	10	513-BKGDS1A	133	
1141	11/12/2010 11:35	88	72	16	513-BKGDS1A	133	
1142	11/12/2010 11:35	82	72	10	513-BKGDS1A	133	
1143	11/12/2010 11:35	58	72	-14	513-BKGDS1A	133	
1144	11/12/2010 11:36	55	72	-17	513-BKGDS1A	133	
1145	11/12/2010 11:36	53	72	-19	513-BKGDS1A	133	
1146	11/12/2010 11:36	63	72	-9	513-BKGDS1A	133	
1147	11/12/2010 11:36	75	72	3	513-BKGDS1A	133	
1148	11/12/2010 11:36	69	72	-3	513-BKGDS1A	133	
1149	11/12/2010 11:36	68	72	-4	513-BKGDS1A	133	
1150	11/12/2010 11:36	82	72	10	513-BKGDS1A	133	
1151	11/12/2010 11:36	75	72	3	513-BKGDS1A	133	
1152	11/12/2010 11:39	96	72	24	513-BKGDS1A	133	



TETRA TECH EC, INC.
 Hunters Point Shipyard
 San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1153	11/12/2010 11:39	69	72	-3	513-BKGDS1A	133	
1154	11/12/2010 11:39	69	72	-3	513-BKGDS1A	133	
1155	11/12/2010 11:39	71	72	-1	513-BKGDS1A	133	
1156	11/12/2010 11:39	66	72	-6	513-BKGDS1A	133	
1157	11/12/2010 11:39	54	72	-18	513-BKGDS1A	133	
1158	11/12/2010 11:39	47	72	-25	513-BKGDS1A	133	
1159	11/12/2010 11:39	49	72	-23	513-BKGDS1A	133	
1160	11/12/2010 11:39	53	72	-19	513-BKGDS1A	133	
1161	11/12/2010 11:40	46	72	-26	513-BKGDS1A	133	
1162	11/12/2010 11:40	54	72	-18	513-BKGDS1A	133	
1163	11/12/2010 11:40	83	72	11	513-BKGDS1A	133	
1164	11/12/2010 11:41	76	72	4	513-BKGDS1A	133	
1165	11/12/2010 11:41	50	72	-22	513-BKGDS1A	133	
1166	11/12/2010 11:41	55	72	-17	513-BKGDS1A	133	
1167	11/12/2010 11:41	75	72	3	513-BKGDS1A	133	
1168	11/12/2010 11:41	63	72	-9	513-BKGDS1A	133	
1169	11/12/2010 11:41	75	72	3	513-BKGDS1A	133	
1170	11/12/2010 11:41	61	72	-11	513-BKGDS1A	133	
1171	11/12/2010 11:41	82	72	10	513-BKGDS1A	133	
1172	11/12/2010 11:41	56	72	-16	513-BKGDS1A	133	
1173	11/12/2010 11:43	60	72	-12	513-BKGDS1A	133	
1174	11/12/2010 11:43	58	72	-14	513-BKGDS1A	133	
1175	11/12/2010 11:43	47	72	-25	513-BKGDS1A	133	
1176	11/12/2010 11:44	59	72	-13	513-BKGDS1A	133	
1177	11/12/2010 11:44	53	72	-19	513-BKGDS1A	133	
1178	11/12/2010 11:44	89	72	17	513-BKGDS1A	133	
1179	11/12/2010 11:44	74	72	2	513-BKGDS1A	133	
1180	11/12/2010 11:44	92	72	20	513-BKGDS1A	133	
1181	11/12/2010 11:44	101	72	29	513-BKGDS1A	133	
1182	11/12/2010 11:44	112	72	40	513-BKGDS1A	133	
1183	11/12/2010 11:45	106	72	34	513-BKGDS1A	133	
1184	11/12/2010 11:45	105	72	33	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1185	11/12/2010 11:45	87	72	15	513-BKGDS1A	133	
1186	11/12/2010 11:45	70	72	-2	513-BKGDS1A	133	
1187	11/12/2010 11:45	79	72	7	513-BKGDS1A	133	
1188	11/12/2010 11:46	67	72	-5	513-BKGDS1A	133	
1189	11/12/2010 11:46	63	72	-9	513-BKGDS1A	133	
1190	11/12/2010 11:46	78	72	6	513-BKGDS1A	133	
1191	11/12/2010 11:46	82	72	10	513-BKGDS1A	133	
1192	11/12/2010 11:46	104	72	32	513-BKGDS1A	133	
1193	11/12/2010 11:47	66	72	-6	513-BKGDS1A	133	
1194	11/12/2010 11:47	79	72	7	513-BKGDS1A	133	
1195	11/12/2010 11:48	59	72	-13	513-BKGDS1A	133	
1196	11/12/2010 11:48	62	72	-10	513-BKGDS1A	133	
1197	11/12/2010 11:48	58	72	-14	513-BKGDS1A	133	
1198	11/12/2010 11:48	66	72	-6	513-BKGDS1A	133	
1199	11/12/2010 11:48	67	72	-5	513-BKGDS1A	133	
1200	11/12/2010 11:48	64	72	-8	513-BKGDS1A	133	
1201	11/12/2010 11:48	53	72	-19	513-BKGDS1A	133	
1202	11/12/2010 11:48	77	72	5	513-BKGDS1A	133	
1203	11/12/2010 12:42	61	72	-11	513-BKGDS1A	133	
1204	11/12/2010 12:42	65	72	-7	513-BKGDS1A	133	
1205	11/12/2010 12:42	59	72	-13	513-BKGDS1A	133	
1206	11/12/2010 12:42	70	72	-2	513-BKGDS1A	133	
1207	11/12/2010 12:42	61	72	-11	513-BKGDS1A	133	
1208	11/12/2010 12:43	65	72	-7	513-BKGDS1A	133	
1209	11/12/2010 12:43	63	72	-9	513-BKGDS1A	133	
1210	11/12/2010 12:43	49	72	-23	513-BKGDS1A	133	
1211	11/12/2010 12:43	44	72	-28	513-BKGDS1A	133	
1212	11/12/2010 12:43	54	72	-18	513-BKGDS1A	133	
1213	11/12/2010 12:43	64	72	-8	513-BKGDS1A	133	
1214	11/12/2010 12:43	49	72	-23	513-BKGDS1A	133	
1215	11/12/2010 12:44	57	72	-15	513-BKGDS1A	133	
1216	11/12/2010 12:44	58	72	-14	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1217	11/12/2010 12:44	52	72	-20	513-BKGDS1A	133	
1218	11/12/2010 12:44	49	72	-23	513-BKGDS1A	133	
1219	11/12/2010 12:44	52	72	-20	513-BKGDS1A	133	
1220	11/12/2010 12:44	53	72	-19	513-BKGDS1A	133	
1221	11/12/2010 12:45	57	72	-15	513-BKGDS1A	133	
1222	11/12/2010 12:45	60	72	-12	513-BKGDS1A	133	
1223	11/12/2010 12:45	68	72	-4	513-BKGDS1A	133	
1224	11/12/2010 12:45	48	72	-24	513-BKGDS1A	133	
1225	11/12/2010 12:45	101	72	29	513-BKGDS1A	133	
1226	11/12/2010 12:45	110	72	38	513-BKGDS1A	133	
1227	11/12/2010 12:46	83	72	11	513-BKGDS1A	133	
1228	11/12/2010 12:46	73	72	1	513-BKGDS1A	133	
1229	11/12/2010 12:46	70	72	-2	513-BKGDS1A	133	
1230	11/12/2010 12:46	60	72	-12	513-BKGDS1A	133	
1231	11/12/2010 12:46	60	72	-12	513-BKGDS1A	133	
1232	11/12/2010 12:47	49	72	-23	513-BKGDS1A	133	
1233	11/12/2010 12:47	45	72	-27	513-BKGDS1A	133	
1234	11/12/2010 12:47	73	72	1	513-BKGDS1A	133	
1235	11/12/2010 12:47	70	72	-2	513-BKGDS1A	133	
1236	11/12/2010 12:47	48	72	-24	513-BKGDS1A	133	
1237	11/12/2010 12:47	54	72	-18	513-BKGDS1A	133	
1238	11/12/2010 12:47	51	72	-21	513-BKGDS1A	133	
1239	11/12/2010 12:47	52	72	-20	513-BKGDS1A	133	
1240	11/12/2010 12:48	67	72	-5	513-BKGDS1A	133	
1241	11/12/2010 12:48	61	72	-11	513-BKGDS1A	133	
1242	11/12/2010 12:48	71	72	-1	513-BKGDS1A	133	
1243	11/12/2010 12:48	89	72	17	513-BKGDS1A	133	
1244	11/12/2010 12:48	71	72	-1	513-BKGDS1A	133	
1245	11/12/2010 12:49	64	72	-8	513-BKGDS1A	133	
1246	11/12/2010 12:49	84	72	12	513-BKGDS1A	133	
1247	11/12/2010 12:49	73	72	1	513-BKGDS1A	133	
1248	11/12/2010 12:49	61	72	-11	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1249	11/12/2010 12:49	81	72	9	513-BKGDS1A	133	
1250	11/12/2010 12:49	76	72	4	513-BKGDS1A	133	
1251	11/12/2010 12:49	62	72	-10	513-BKGDS1A	133	
1252	11/12/2010 12:49	50	72	-22	513-BKGDS1A	133	
1253	11/12/2010 12:51	69	72	-3	513-BKGDS1A	133	
1254	11/12/2010 12:51	50	72	-22	513-BKGDS1A	133	
1255	11/12/2010 12:51	67	72	-5	513-BKGDS1A	133	
1256	11/12/2010 12:51	52	72	-20	513-BKGDS1A	133	
1257	11/12/2010 12:51	71	72	-1	513-BKGDS1A	133	
1258	11/12/2010 12:51	49	72	-23	513-BKGDS1A	133	
1259	11/12/2010 12:51	48	72	-24	513-BKGDS1A	133	
1260	11/12/2010 12:51	72	72	0	513-BKGDS1A	133	
1261	11/12/2010 12:51	85	72	13	513-BKGDS1A	133	
1262	11/12/2010 12:52	78	72	6	513-BKGDS1A	133	
1263	11/12/2010 12:52	61	72	-11	513-BKGDS1A	133	
1264	11/12/2010 12:52	84	72	12	513-BKGDS1A	133	
1265	11/12/2010 12:52	87	72	15	513-BKGDS1A	133	
1266	11/12/2010 12:52	73	72	1	513-BKGDS1A	133	
1267	11/12/2010 12:54	48	72	-24	513-BKGDS1A	133	
1268	11/12/2010 12:54	72	72	0	513-BKGDS1A	133	
1269	11/12/2010 12:54	75	72	3	513-BKGDS1A	133	
1270	11/12/2010 12:54	76	72	4	513-BKGDS1A	133	
1271	11/12/2010 12:54	65	72	-7	513-BKGDS1A	133	
1272	11/12/2010 12:54	61	72	-11	513-BKGDS1A	133	
1273	11/12/2010 12:54	60	72	-12	513-BKGDS1A	133	
1274	11/12/2010 12:54	51	72	-21	513-BKGDS1A	133	
1275	11/12/2010 12:54	46	72	-26	513-BKGDS1A	133	
1276	11/12/2010 12:55	63	72	-9	513-BKGDS1A	133	
1277	11/12/2010 12:55	57	72	-15	513-BKGDS1A	133	
1278	11/12/2010 12:55	45	72	-27	513-BKGDS1A	133	
1279	11/12/2010 12:55	58	72	-14	513-BKGDS1A	133	
1280	11/12/2010 12:55	83	72	11	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1281	11/12/2010 12:55	77	72	5	513-BKGDS1A	133	
1282	11/12/2010 12:55	96	72	24	513-BKGDS1A	133	
1283	11/12/2010 13:40	45	72	-27	513-BKGDS1A	133	
1284	11/12/2010 13:40	42	72	-30	513-BKGDS1A	133	
1285	11/12/2010 13:40	71	72	-1	513-BKGDS1A	133	
1286	11/12/2010 13:41	64	72	-8	513-BKGDS1A	133	
1287	11/12/2010 13:41	64	72	-8	513-BKGDS1A	133	
1288	11/12/2010 13:41	71	72	-1	513-BKGDS1A	133	
1289	11/12/2010 13:41	62	72	-10	513-BKGDS1A	133	
1290	11/12/2010 13:41	49	72	-23	513-BKGDS1A	133	
1291	11/12/2010 13:41	44	72	-28	513-BKGDS1A	133	
1292	11/12/2010 13:41	47	72	-25	513-BKGDS1A	133	
1293	11/12/2010 13:41	65	72	-7	513-BKGDS1A	133	
1294	11/12/2010 13:41	63	72	-9	513-BKGDS1A	133	
1295	11/12/2010 13:42	48	72	-24	513-BKGDS1A	133	
1296	11/12/2010 13:42	46	72	-26	513-BKGDS1A	133	
1297	11/12/2010 13:42	59	72	-13	513-BKGDS1A	133	
1298	11/12/2010 13:43	76	72	4	513-BKGDS1A	133	
1299	11/12/2010 13:43	42	72	-30	513-BKGDS1A	133	
1300	11/12/2010 13:43	65	72	-7	513-BKGDS1A	133	
1301	11/12/2010 13:43	60	72	-12	513-BKGDS1A	133	
1302	11/12/2010 13:43	44	72	-28	513-BKGDS1A	133	
1303	11/12/2010 13:43	42	72	-30	513-BKGDS1A	133	
1304	11/12/2010 13:43	59	72	-13	513-BKGDS1A	133	
1305	11/12/2010 13:43	60	72	-12	513-BKGDS1A	133	
1306	11/12/2010 13:44	62	72	-10	513-BKGDS1A	133	
1307	11/12/2010 13:44	62	72	-10	513-BKGDS1A	133	
1308	11/12/2010 13:44	75	72	3	513-BKGDS1A	133	
1309	11/12/2010 13:44	89	72	17	513-BKGDS1A	133	
1310	11/12/2010 13:44	81	72	9	513-BKGDS1A	133	
1311	11/12/2010 13:44	79	72	7	513-BKGDS1A	133	
1312	11/12/2010 13:44	84	72	12	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1313	11/12/2010 13:44	91	72	19	513-BKGDS1A	133	
1314	11/12/2010 13:45	54	72	-18	513-BKGDS1A	133	
1315	11/12/2010 13:45	48	72	-24	513-BKGDS1A	133	
1316	11/12/2010 13:45	82	72	10	513-BKGDS1A	133	
1317	11/12/2010 13:46	58	72	-14	513-BKGDS1A	133	
1318	11/12/2010 13:46	64	72	-8	513-BKGDS1A	133	
1319	11/12/2010 13:46	56	72	-16	513-BKGDS1A	133	
1320	11/12/2010 13:46	59	72	-13	513-BKGDS1A	133	
1321	11/12/2010 13:46	61	72	-11	513-BKGDS1A	133	
1322	11/12/2010 13:46	56	72	-16	513-BKGDS1A	133	
1323	11/12/2010 13:46	60	72	-12	513-BKGDS1A	133	
1324	11/12/2010 13:46	47	72	-25	513-BKGDS1A	133	
1325	11/12/2010 13:46	46	72	-26	513-BKGDS1A	133	
1326	11/12/2010 13:47	56	72	-16	513-BKGDS1A	133	
1327	11/12/2010 13:47	48	72	-24	513-BKGDS1A	133	
1328	11/12/2010 13:47	49	72	-23	513-BKGDS1A	133	
1329	11/12/2010 13:47	41	72	-31	513-BKGDS1A	133	
1330	11/12/2010 13:47	48	72	-24	513-BKGDS1A	133	
1331	11/12/2010 13:48	57	72	-15	513-BKGDS1A	133	
1332	11/12/2010 13:48	51	72	-21	513-BKGDS1A	133	
1333	11/12/2010 13:48	85	72	13	513-BKGDS1A	133	
1334	11/12/2010 13:48	94	72	22	513-BKGDS1A	133	
1335	11/12/2010 13:48	70	72	-2	513-BKGDS1A	133	
1336	11/12/2010 13:48	69	72	-3	513-BKGDS1A	133	
1337	11/12/2010 13:48	49	72	-23	513-BKGDS1A	133	
1338	11/12/2010 13:49	55	72	-17	513-BKGDS1A	133	
1339	11/12/2010 13:49	61	72	-11	513-BKGDS1A	133	
1340	11/12/2010 13:49	64	72	-8	513-BKGDS1A	133	
1341	11/12/2010 13:49	72	72	0	513-BKGDS1A	133	
1342	11/12/2010 13:49	83	72	11	513-BKGDS1A	133	
1343	11/12/2010 13:49	73	72	1	513-BKGDS1A	133	
1344	11/12/2010 13:49	73	72	1	513-BKGDS1A	133	



TETRATECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1345	11/12/2010 13:49	75	72	3	513-BKGDS1A	133	
1346	11/12/2010 13:49	55	72	-17	513-BKGDS1A	133	
1347	11/12/2010 13:50	57	72	-15	513-BKGDS1A	133	
1348	11/12/2010 13:50	65	72	-7	513-BKGDS1A	133	
1349	11/12/2010 13:50	50	72	-22	513-BKGDS1A	133	
1350	11/12/2010 13:51	64	72	-8	513-BKGDS1A	133	
1351	11/12/2010 13:51	47	72	-25	513-BKGDS1A	133	
1352	11/12/2010 13:51	64	72	-8	513-BKGDS1A	133	
1353	11/12/2010 13:51	77	72	5	513-BKGDS1A	133	
1354	11/12/2010 13:51	70	72	-2	513-BKGDS1A	133	
1355	11/12/2010 13:51	53	72	-19	513-BKGDS1A	133	
1356	11/12/2010 13:51	65	72	-7	513-BKGDS1A	133	
1357	11/12/2010 13:51	57	72	-15	513-BKGDS1A	133	
1358	11/12/2010 13:52	70	72	-2	513-BKGDS1A	133	
1359	11/12/2010 13:52	74	72	2	513-BKGDS1A	133	
1360	11/12/2010 13:52	103	72	31	513-BKGDS1A	133	
1361	11/12/2010 13:52	101	72	29	513-BKGDS1A	133	
1362	11/12/2010 13:52	81	72	9	513-BKGDS1A	133	
1363	11/12/2010 13:52	75	72	3	513-BKGDS1A	133	
1364	11/12/2010 13:52	62	72	-10	513-BKGDS1A	133	
1365	11/12/2010 13:52	60	72	-12	513-BKGDS1A	133	
1366	11/12/2010 13:52	67	72	-5	513-BKGDS1A	133	
1367	11/12/2010 13:53	58	72	-14	513-BKGDS1A	133	
1368	11/12/2010 13:54	61	72	-11	513-BKGDS1A	133	
1369	11/12/2010 13:54	48	72	-24	513-BKGDS1A	133	
1370	11/12/2010 13:54	61	72	-11	513-BKGDS1A	133	
1371	11/12/2010 13:54	61	72	-11	513-BKGDS1A	133	
1372	11/12/2010 13:54	48	72	-24	513-BKGDS1A	133	
1373	11/12/2010 13:54	87	72	15	513-BKGDS1A	133	
1374	11/12/2010 13:54	101	72	29	513-BKGDS1A	133	
1375	11/12/2010 13:54	88	72	16	513-BKGDS1A	133	
1376	11/12/2010 13:54	79	72	7	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1377	11/12/2010 13:55	68	72	-4	513-BKGDS1A	133	
1378	11/12/2010 13:55	47	72	-25	513-BKGDS1A	133	
1379	11/12/2010 13:55	47	72	-25	513-BKGDS1A	133	
1380	11/12/2010 13:55	72	72	0	513-BKGDS1A	133	
1381	11/12/2010 13:55	78	72	6	513-BKGDS1A	133	
1382	11/12/2010 13:55	76	72	4	513-BKGDS1A	133	
1383	11/12/2010 13:55	70	72	-2	513-BKGDS1A	133	
1384	11/12/2010 13:55	90	72	18	513-BKGDS1A	133	
1385	11/12/2010 13:56	62	72	-10	513-BKGDS1A	133	
1386	11/12/2010 13:56	44	72	-28	513-BKGDS1A	133	
1387	11/12/2010 13:56	43	72	-29	513-BKGDS1A	133	
1388	11/12/2010 13:57	51	72	-21	513-BKGDS1A	133	
1389	11/12/2010 13:57	79	72	7	513-BKGDS1A	133	
1390	11/12/2010 13:57	100	72	28	513-BKGDS1A	133	
1391	11/12/2010 13:57	116	72	44	513-BKGDS1A	133	
1392	11/12/2010 13:57	94	72	22	513-BKGDS1A	133	
1393	11/12/2010 13:57	80	72	8	513-BKGDS1A	133	
1394	11/12/2010 13:57	82	72	10	513-BKGDS1A	133	
1395	11/12/2010 13:57	65	72	-7	513-BKGDS1A	133	
1396	11/12/2010 13:58	57	72	-15	513-BKGDS1A	133	
1397	11/12/2010 13:58	84	72	12	513-BKGDS1A	133	
1398	11/12/2010 13:58	65	72	-7	513-BKGDS1A	133	
1399	11/12/2010 13:58	61	72	-11	513-BKGDS1A	133	
1400	11/12/2010 13:58	64	72	-8	513-BKGDS1A	133	
1401	11/12/2010 13:58	54	72	-18	513-BKGDS1A	133	
1402	11/12/2010 13:58	68	72	-4	513-BKGDS1A	133	
1403	11/12/2010 13:58	62	72	-10	513-BKGDS1A	133	
1404	11/12/2010 13:58	68	72	-4	513-BKGDS1A	133	
1405	11/12/2010 13:59	53	72	-19	513-BKGDS1A	133	
1406	11/12/2010 13:59	42	72	-30	513-BKGDS1A	133	
1407	11/12/2010 13:59	43	72	-29	513-BKGDS1A	133	
1408	11/12/2010 14:04	78	72	6	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1409	11/12/2010 14:04	47	72	-25	513-BKGDS1A	133	
1410	11/12/2010 14:04	71	72	-1	513-BKGDS1A	133	
1411	11/12/2010 14:04	52	72	-20	513-BKGDS1A	133	
1412	11/12/2010 14:05	45	72	-27	513-BKGDS1A	133	
1413	11/12/2010 14:05	75	72	3	513-BKGDS1A	133	
1414	11/12/2010 14:05	87	72	15	513-BKGDS1A	133	
1415	11/12/2010 14:05	70	72	-2	513-BKGDS1A	133	
1416	11/12/2010 14:05	97	72	25	513-BKGDS1A	133	
1417	11/12/2010 14:05	110	72	38	513-BKGDS1A	133	
1418	11/12/2010 14:05	103	72	31	513-BKGDS1A	133	
1419	11/12/2010 14:05	76	72	4	513-BKGDS1A	133	
1420	11/12/2010 14:06	76	72	4	513-BKGDS1A	133	
1421	11/12/2010 14:06	123	72	51	513-BKGDS1A	133	
1422	11/12/2010 14:06	89	72	17	513-BKGDS1A	133	
1423	11/12/2010 14:06	88	72	16	513-BKGDS1A	133	
1424	11/12/2010 14:06	96	72	24	513-BKGDS1A	133	
1425	11/12/2010 14:06	116	72	44	513-BKGDS1A	133	
1426	11/12/2010 14:06	103	72	31	513-BKGDS1A	133	
1427	11/12/2010 14:06	87	72	15	513-BKGDS1A	133	
1428	11/12/2010 14:06	74	72	2	513-BKGDS1A	133	
1429	11/12/2010 14:07	57	72	-15	513-BKGDS1A	133	
1430	11/12/2010 14:07	45	72	-27	513-BKGDS1A	133	
1431	11/12/2010 14:07	65	72	-7	513-BKGDS1A	133	
1432	11/12/2010 14:08	43	72	-29	513-BKGDS1A	133	
1433	11/12/2010 14:08	77	72	5	513-BKGDS1A	133	
1434	11/12/2010 14:08	109	72	37	513-BKGDS1A	133	
1435	11/12/2010 14:08	94	72	22	513-BKGDS1A	133	
1436	11/12/2010 14:08	69	72	-3	513-BKGDS1A	133	
1437	11/12/2010 14:08	75	72	3	513-BKGDS1A	133	
1438	11/12/2010 14:08	76	72	4	513-BKGDS1A	133	
1439	11/12/2010 14:08	82	72	10	513-BKGDS1A	133	
1440	11/12/2010 14:09	74	72	2	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1441	11/12/2010 14:09	88	72	16	513-BKGDS1A	133	
1442	11/12/2010 14:09	74	72	2	513-BKGDS1A	133	
1443	11/12/2010 14:09	86	72	14	513-BKGDS1A	133	
1444	11/12/2010 14:09	105	72	33	513-BKGDS1A	133	
1445	11/12/2010 14:09	73	72	1	513-BKGDS1A	133	
1446	11/12/2010 14:09	68	72	-4	513-BKGDS1A	133	
1447	11/12/2010 14:09	53	72	-19	513-BKGDS1A	133	
1448	11/12/2010 14:09	54	72	-18	513-BKGDS1A	133	
1449	11/12/2010 14:10	57	72	-15	513-BKGDS1A	133	
1450	11/12/2010 14:10	53	72	-19	513-BKGDS1A	133	
1451	11/12/2010 14:10	44	72	-28	513-BKGDS1A	133	
1452	11/12/2010 14:10	68	72	-4	513-BKGDS1A	133	
1453	11/12/2010 14:15	71	72	-1	513-BKGDS1A	133	
1454	11/12/2010 14:15	43	72	-29	513-BKGDS1A	133	
1455	11/12/2010 14:16	50	72	-22	513-BKGDS1A	133	
1456	11/12/2010 14:16	59	72	-13	513-BKGDS1A	133	
1457	11/12/2010 14:16	53	72	-19	513-BKGDS1A	133	
1458	11/12/2010 14:16	101	72	29	513-BKGDS1A	133	
1459	11/12/2010 14:16	67	72	-5	513-BKGDS1A	133	
1460	11/12/2010 14:16	68	72	-4	513-BKGDS1A	133	
1461	11/12/2010 14:16	63	72	-9	513-BKGDS1A	133	
1462	11/12/2010 14:16	60	72	-12	513-BKGDS1A	133	
1463	11/12/2010 14:17	64	72	-8	513-BKGDS1A	133	
1464	11/12/2010 14:17	48	72	-24	513-BKGDS1A	133	
1465	11/12/2010 14:17	60	72	-12	513-BKGDS1A	133	
1466	11/12/2010 14:17	81	72	9	513-BKGDS1A	133	
1467	11/12/2010 14:17	79	72	7	513-BKGDS1A	133	
1468	11/12/2010 14:17	97	72	25	513-BKGDS1A	133	
1469	11/12/2010 14:17	63	72	-9	513-BKGDS1A	133	
1470	11/12/2010 14:17	60	72	-12	513-BKGDS1A	133	
1471	11/12/2010 14:17	65	72	-7	513-BKGDS1A	133	
1472	11/12/2010 14:18	86	72	14	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1473	11/12/2010 14:18	84	72	12	513-BKGD51A	133	
1474	11/12/2010 14:18	70	72	-2	513-BKGD51A	133	
1475	11/12/2010 14:19	47	72	-25	513-BKGD51A	133	
1476	11/12/2010 14:19	64	72	-8	513-BKGD51A	133	
1477	11/12/2010 14:19	83	72	11	513-BKGD51A	133	
1478	11/12/2010 14:19	80	72	8	513-BKGD51A	133	
1479	11/12/2010 14:20	104	72	32	513-BKGD51A	133	
1480	11/12/2010 14:20	80	72	8	513-BKGD51A	133	
1481	11/12/2010 14:20	67	72	-5	513-BKGD51A	133	
1482	11/12/2010 14:20	68	72	-4	513-BKGD51A	133	
1483	11/12/2010 14:20	63	72	-9	513-BKGD51A	133	
1484	11/12/2010 14:20	56	72	-16	513-BKGD51A	133	
1485	11/12/2010 14:20	49	72	-23	513-BKGD51A	133	
1486	11/12/2010 14:20	61	72	-11	513-BKGD51A	133	
1487	11/12/2010 14:20	60	72	-12	513-BKGD51A	133	
1488	11/12/2010 14:21	92	72	20	513-BKGD51A	133	
1489	11/12/2010 14:21	107	72	35	513-BKGD51A	133	
1490	11/12/2010 14:21	68	72	-4	513-BKGD51A	133	
1491	11/12/2010 14:21	46	72	-26	513-BKGD51A	133	
1492	11/12/2010 14:21	67	72	-5	513-BKGD51A	133	
1493	11/12/2010 14:21	45	72	-27	513-BKGD51A	133	
1494	11/12/2010 14:21	72	72	0	513-BKGD51A	133	
1495	11/12/2010 14:21	76	72	4	513-BKGD51A	133	
1496	11/12/2010 14:22	70	72	-2	513-BKGD51A	133	
1497	11/12/2010 14:22	64	72	-8	513-BKGD51A	133	
1498	11/12/2010 14:22	59	72	-13	513-BKGD51A	133	
1499	11/12/2010 14:22	50	72	-22	513-BKGD51A	133	
1500	11/12/2010 14:23	68	72	-4	513-BKGD51A	133	
1501	11/12/2010 14:23	45	72	-27	513-BKGD51A	133	
1502	11/12/2010 14:23	53	72	-19	513-BKGD51A	133	
1503	11/12/2010 14:23	49	72	-23	513-BKGD51A	133	
1504	11/12/2010 14:23	56	72	-16	513-BKGD51A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1505	11/12/2010 14:23	86	72	14	513-BKGDS1A	133	
1506	11/12/2010 14:23	81	72	9	513-BKGDS1A	133	
1507	11/12/2010 14:23	109	72	37	513-BKGDS1A	133	
1508	11/12/2010 14:24	79	72	7	513-BKGDS1A	133	
1509	11/12/2010 14:24	62	72	-10	513-BKGDS1A	133	
1510	11/12/2010 14:24	59	72	-13	513-BKGDS1A	133	
1511	11/12/2010 14:24	63	72	-9	513-BKGDS1A	133	
1512	11/12/2010 14:24	88	72	16	513-BKGDS1A	133	
1513	11/12/2010 14:24	66	72	-6	513-BKGDS1A	133	
1514	11/12/2010 14:24	78	72	6	513-BKGDS1A	133	
1515	11/12/2010 14:24	59	72	-13	513-BKGDS1A	133	
1516	11/12/2010 14:24	68	72	-4	513-BKGDS1A	133	
1517	11/12/2010 14:25	60	72	-12	513-BKGDS1A	133	
1518	11/12/2010 14:25	87	72	15	513-BKGDS1A	133	
1519	11/12/2010 14:25	46	72	-26	513-BKGDS1A	133	
1520	11/12/2010 14:26	58	72	-14	513-BKGDS1A	133	
1521	11/12/2010 14:26	85	72	13	513-BKGDS1A	133	
1522	11/12/2010 14:26	86	72	14	513-BKGDS1A	133	
1523	11/12/2010 14:26	70	72	-2	513-BKGDS1A	133	
1524	11/12/2010 14:26	77	72	5	513-BKGDS1A	133	
1525	11/12/2010 14:26	73	72	1	513-BKGDS1A	133	
1526	11/12/2010 14:26	78	72	6	513-BKGDS1A	133	
1527	11/12/2010 14:26	68	72	-4	513-BKGDS1A	133	
1528	11/12/2010 14:27	55	72	-17	513-BKGDS1A	133	
1529	11/12/2010 14:27	74	72	2	513-BKGDS1A	133	
1530	11/12/2010 14:27	55	72	-17	513-BKGDS1A	133	
1531	11/12/2010 14:27	57	72	-15	513-BKGDS1A	133	
1532	11/12/2010 14:27	72	72	0	513-BKGDS1A	133	
1533	11/12/2010 14:27	80	72	8	513-BKGDS1A	133	
1534	11/12/2010 14:27	105	72	33	513-BKGDS1A	133	
1535	11/12/2010 14:27	81	72	9	513-BKGDS1A	133	
1536	11/12/2010 14:27	68	72	-4	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1537	11/12/2010 14:28	68	72	-4	513-BKGDS1A	133	
1538	11/12/2010 14:28	66	72	-6	513-BKGDS1A	133	
1539	11/12/2010 14:28	50	72	-22	513-BKGDS1A	133	
1540	11/12/2010 14:28	57	72	-15	513-BKGDS1A	133	
1541	11/12/2010 14:29	54	72	-18	513-BKGDS1A	133	
1542	11/12/2010 14:29	41	72	-31	513-BKGDS1A	133	
1543	11/12/2010 14:29	43	72	-29	513-BKGDS1A	133	
1544	11/12/2010 14:29	77	72	5	513-BKGDS1A	133	
1545	11/12/2010 14:29	57	72	-15	513-BKGDS1A	133	
1546	11/12/2010 14:29	43	72	-29	513-BKGDS1A	133	
1547	11/12/2010 14:29	52	72	-20	513-BKGDS1A	133	
1548	11/12/2010 14:29	49	72	-23	513-BKGDS1A	133	
1549	11/12/2010 14:30	53	72	-19	513-BKGDS1A	133	
1550	11/12/2010 14:30	76	72	4	513-BKGDS1A	133	
1551	11/12/2010 14:30	82	72	10	513-BKGDS1A	133	
1552	11/12/2010 14:30	77	72	5	513-BKGDS1A	133	
1553	11/12/2010 14:30	53	72	-19	513-BKGDS1A	133	
1554	11/12/2010 14:30	89	72	17	513-BKGDS1A	133	
1555	11/12/2010 14:30	75	72	3	513-BKGDS1A	133	
1556	11/12/2010 14:30	72	72	0	513-BKGDS1A	133	
1557	11/12/2010 14:30	85	72	13	513-BKGDS1A	133	
1558	11/12/2010 14:31	78	72	6	513-BKGDS1A	133	
1559	11/12/2010 14:31	79	72	7	513-BKGDS1A	133	
1560	11/12/2010 14:31	80	72	8	513-BKGDS1A	133	
1561	11/12/2010 14:31	84	72	12	513-BKGDS1A	133	
1562	11/12/2010 14:31	76	72	4	513-BKGDS1A	133	
1563	11/12/2010 14:31	101	72	29	513-BKGDS1A	133	
1564	11/12/2010 14:31	96	72	24	513-BKGDS1A	133	
1565	11/12/2010 14:32	68	72	-4	513-BKGDS1A	133	
1566	11/12/2010 14:32	47	72	-25	513-BKGDS1A	133	
1567	11/12/2010 14:32	61	72	-11	513-BKGDS1A	133	
1568	11/12/2010 14:32	55	72	-17	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1569	11/12/2010 14:33	47	72	-25	513-BKGDS1A	133	
1570	11/12/2010 14:33	54	72	-18	513-BKGDS1A	133	
1571	11/12/2010 14:33	67	72	-5	513-BKGDS1A	133	
1572	11/12/2010 14:33	115	72	43	513-BKGDS1A	133	
1573	11/12/2010 14:33	109	72	37	513-BKGDS1A	133	
1574	11/12/2010 14:33	78	72	6	513-BKGDS1A	133	
1575	11/12/2010 14:33	78	72	6	513-BKGDS1A	133	
1576	11/12/2010 14:33	104	72	32	513-BKGDS1A	133	
1577	11/12/2010 14:34	74	72	2	513-BKGDS1A	133	
1578	11/12/2010 14:34	54	72	-18	513-BKGDS1A	133	
1579	11/12/2010 14:34	44	72	-28	513-BKGDS1A	133	
1580	11/12/2010 14:34	48	72	-24	513-BKGDS1A	133	
1581	11/12/2010 14:34	78	72	6	513-BKGDS1A	133	
1582	11/12/2010 14:34	68	72	-4	513-BKGDS1A	133	
1583	11/12/2010 14:34	63	72	-9	513-BKGDS1A	133	
1584	11/12/2010 14:34	55	72	-17	513-BKGDS1A	133	
1585	11/12/2010 14:34	65	72	-7	513-BKGDS1A	133	
1586	11/12/2010 14:35	53	72	-19	513-BKGDS1A	133	
1587	11/12/2010 14:35	58	72	-14	513-BKGDS1A	133	
1588	11/12/2010 14:35	64	72	-8	513-BKGDS1A	133	
1589	11/12/2010 14:36	79	72	7	513-BKGDS1A	133	
1590	11/12/2010 14:36	48	72	-24	513-BKGDS1A	133	
1591	11/12/2010 14:36	41	72	-31	513-BKGDS1A	133	
1592	11/12/2010 14:36	53	72	-19	513-BKGDS1A	133	
1593	11/12/2010 14:36	64	72	-8	513-BKGDS1A	133	
1594	11/12/2010 14:36	55	72	-17	513-BKGDS1A	133	
1595	11/12/2010 14:36	47	72	-25	513-BKGDS1A	133	
1596	11/12/2010 14:36	60	72	-12	513-BKGDS1A	133	
1597	11/12/2010 14:36	55	72	-17	513-BKGDS1A	133	
1598	11/12/2010 14:37	56	72	-16	513-BKGDS1A	133	
1599	11/12/2010 14:37	57	72	-15	513-BKGDS1A	133	
1600	11/12/2010 14:37	71	72	-1	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1601	11/12/2010 14:37	95	72	23	513-BKGDS1A	133	
1602	11/12/2010 14:37	82	72	10	513-BKGDS1A	133	
1603	11/12/2010 14:37	69	72	-3	513-BKGDS1A	133	
1604	11/12/2010 14:37	69	72	-3	513-BKGDS1A	133	
1605	11/12/2010 14:37	75	72	3	513-BKGDS1A	133	
1606	11/12/2010 14:37	61	72	-11	513-BKGDS1A	133	
1607	11/12/2010 14:38	88	72	16	513-BKGDS1A	133	
1608	11/12/2010 14:38	83	72	11	513-BKGDS1A	133	
1609	11/12/2010 14:38	85	72	13	513-BKGDS1A	133	
1610	11/12/2010 14:38	108	72	36	513-BKGDS1A	133	
1611	11/12/2010 14:38	75	72	3	513-BKGDS1A	133	
1612	11/12/2010 14:38	62	72	-10	513-BKGDS1A	133	
1613	11/12/2010 14:39	82	72	10	513-BKGDS1A	133	
1614	11/12/2010 14:39	46	72	-26	513-BKGDS1A	133	
1615	11/12/2010 14:39	62	72	-10	513-BKGDS1A	133	
1616	11/12/2010 14:40	91	72	19	513-BKGDS1A	133	
1617	11/12/2010 14:40	104	72	32	513-BKGDS1A	133	
1618	11/12/2010 14:40	72	72	0	513-BKGDS1A	133	
1619	11/12/2010 14:40	84	72	12	513-BKGDS1A	133	
1620	11/12/2010 14:40	66	72	-6	513-BKGDS1A	133	
1621	11/12/2010 14:40	63	72	-9	513-BKGDS1A	133	
1622	11/12/2010 14:40	50	72	-22	513-BKGDS1A	133	
1623	11/12/2010 14:40	49	72	-23	513-BKGDS1A	133	
1624	11/12/2010 14:41	73	72	1	513-BKGDS1A	133	
1625	11/12/2010 14:41	82	72	10	513-BKGDS1A	133	
1626	11/12/2010 14:41	70	72	-2	513-BKGDS1A	133	
1627	11/12/2010 14:41	64	72	-8	513-BKGDS1A	133	
1628	11/12/2010 14:41	73	72	1	513-BKGDS1A	133	
1629	11/12/2010 14:41	99	72	27	513-BKGDS1A	133	
1630	11/12/2010 14:41	96	72	24	513-BKGDS1A	133	
1631	11/12/2010 14:41	110	72	38	513-BKGDS1A	133	
1632	11/12/2010 14:41	119	72	47	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1633	11/12/2010 14:42	118	72	46	513-BKGDS1A	133	
1634	11/12/2010 14:42	83	72	11	513-BKGDS1A	133	
1635	11/12/2010 14:43	49	72	-23	513-BKGDS1A	133	
1636	11/12/2010 14:43	79	72	7	513-BKGDS1A	133	
1637	11/12/2010 14:43	66	72	-6	513-BKGDS1A	133	
1638	11/12/2010 14:43	41	72	-31	513-BKGDS1A	133	
1639	11/12/2010 14:43	72	72	0	513-BKGDS1A	133	
1640	11/12/2010 14:43	48	72	-24	513-BKGDS1A	133	
1641	11/12/2010 14:43	58	72	-14	513-BKGDS1A	133	
1642	11/12/2010 14:43	58	72	-14	513-BKGDS1A	133	
1643	11/12/2010 14:43	56	72	-16	513-BKGDS1A	133	
1644	11/12/2010 14:44	71	72	-1	513-BKGDS1A	133	
1645	11/12/2010 14:44	81	72	9	513-BKGDS1A	133	
1646	11/12/2010 14:44	66	72	-6	513-BKGDS1A	133	
1647	11/12/2010 14:44	69	72	-3	513-BKGDS1A	133	
1648	11/12/2010 14:44	67	72	-5	513-BKGDS1A	133	
1649	11/12/2010 14:44	85	72	13	513-BKGDS1A	133	
1650	11/12/2010 14:44	77	72	5	513-BKGDS1A	133	
1651	11/12/2010 14:44	84	72	12	513-BKGDS1A	133	
1652	11/12/2010 14:44	97	72	25	513-BKGDS1A	133	
1653	11/12/2010 14:45	80	72	8	513-BKGDS1A	133	
1654	11/12/2010 14:45	62	72	-10	513-BKGDS1A	133	
1655	11/12/2010 14:45	68	72	-4	513-BKGDS1A	133	
1656	11/12/2010 14:45	91	72	19	513-BKGDS1A	133	
1657	11/12/2010 14:46	64	72	-8	513-BKGDS1A	133	
1658	11/12/2010 14:46	73	72	1	513-BKGDS1A	133	
1659	11/12/2010 14:46	82	72	10	513-BKGDS1A	133	
1660	11/12/2010 14:46	90	72	18	513-BKGDS1A	133	
1661	11/12/2010 14:46	101	72	29	513-BKGDS1A	133	
1662	11/12/2010 14:46	69	72	-3	513-BKGDS1A	133	
1663	11/12/2010 14:46	100	72	28	513-BKGDS1A	133	
1664	11/12/2010 14:46	75	72	3	513-BKGDS1A	133	



TETRA TECH EC, INC.
 Hunters Point Shipyard
 San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1665	11/12/2010 14:47	72	72	0	513-BKGDS1A	133	
1666	11/12/2010 14:47	95	72	23	513-BKGDS1A	133	
1667	11/12/2010 14:47	89	72	17	513-BKGDS1A	133	
1668	11/12/2010 14:47	98	72	26	513-BKGDS1A	133	
1669	11/12/2010 14:47	77	72	5	513-BKGDS1A	133	
1670	11/12/2010 14:47	50	72	-22	513-BKGDS1A	133	
1671	11/12/2010 14:47	48	72	-24	513-BKGDS1A	133	
1672	11/12/2010 14:47	42	72	-30	513-BKGDS1A	133	
1673	11/12/2010 14:47	52	72	-20	513-BKGDS1A	133	
1674	11/12/2010 14:48	48	72	-24	513-BKGDS1A	133	
1675	11/12/2010 14:48	68	72	-4	513-BKGDS1A	133	
1676	11/12/2010 14:48	50	72	-22	513-BKGDS1A	133	
1677	11/12/2010 14:49	82	72	10	513-BKGDS1A	133	
1678	11/12/2010 14:49	99	72	27	513-BKGDS1A	133	
1679	11/12/2010 14:49	84	72	12	513-BKGDS1A	133	
1680	11/12/2010 14:49	89	72	17	513-BKGDS1A	133	
1681	11/12/2010 14:49	82	72	10	513-BKGDS1A	133	
1682	11/12/2010 14:49	54	72	-18	513-BKGDS1A	133	
1683	11/12/2010 14:49	48	72	-24	513-BKGDS1A	133	
1684	11/12/2010 14:49	66	72	-6	513-BKGDS1A	133	
1685	11/12/2010 14:49	49	72	-23	513-BKGDS1A	133	
1686	11/12/2010 14:50	56	72	-16	513-BKGDS1A	133	
1687	11/12/2010 14:50	64	72	-8	513-BKGDS1A	133	
1688	11/12/2010 14:50	68	72	-4	513-BKGDS1A	133	
1689	11/12/2010 14:50	64	72	-8	513-BKGDS1A	133	
1690	11/12/2010 14:50	82	72	10	513-BKGDS1A	133	
1691	11/12/2010 14:50	87	72	15	513-BKGDS1A	133	
1692	11/12/2010 14:50	93	72	21	513-BKGDS1A	133	
1693	11/12/2010 14:50	83	72	11	513-BKGDS1A	133	
1694	11/12/2010 14:51	81	72	9	513-BKGDS1A	133	
1695	11/12/2010 14:51	80	72	8	513-BKGDS1A	133	
1696	11/12/2010 14:51	77	72	5	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1697	11/12/2010 14:51	43	72	-29	513-BKGDS1A	133	
1698	11/12/2010 14:51	73	72	1	513-BKGDS1A	133	
1699	11/12/2010 14:52	73	72	1	513-BKGDS1A	133	
1700	11/12/2010 14:52	87	72	15	513-BKGDS1A	133	
1701	11/12/2010 14:52	80	72	8	513-BKGDS1A	133	
1702	11/12/2010 14:52	70	72	-2	513-BKGDS1A	133	
1703	11/12/2010 14:52	68	72	-4	513-BKGDS1A	133	
1704	11/12/2010 14:52	59	72	-13	513-BKGDS1A	133	
1705	11/12/2010 14:52	66	72	-6	513-BKGDS1A	133	
1706	11/12/2010 14:52	51	72	-21	513-BKGDS1A	133	
1707	11/12/2010 14:52	44	72	-28	513-BKGDS1A	133	
1708	11/12/2010 14:53	60	72	-12	513-BKGDS1A	133	
1709	11/12/2010 14:53	64	72	-8	513-BKGDS1A	133	
1710	11/12/2010 14:53	103	72	31	513-BKGDS1A	133	
1711	11/12/2010 14:53	92	72	20	513-BKGDS1A	133	
1712	11/12/2010 14:53	66	72	-6	513-BKGDS1A	133	
1713	11/12/2010 14:53	94	72	22	513-BKGDS1A	133	
1714	11/12/2010 14:53	66	72	-6	513-BKGDS1A	133	
1715	11/12/2010 14:53	60	72	-12	513-BKGDS1A	133	
1716	11/12/2010 14:54	87	72	15	513-BKGDS1A	133	
1717	11/12/2010 14:54	68	72	-4	513-BKGDS1A	133	
1718	11/12/2010 14:54	64	72	-8	513-BKGDS1A	133	
1719	11/12/2010 14:54	57	72	-15	513-BKGDS1A	133	
1720	11/12/2010 14:54	50	72	-22	513-BKGDS1A	133	

Net Gamma cpm Min: -31

Summary Avg: 0

Max: 61

St Dev: 17

Readings > 3σ investigation level are highlighted in blue

* Background ID correlates to instrument reference area background identification number

Gamma measurements > 3σ investigation level are verified by 2360 beta measurements



TETRATECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

2350 Identification #: 513

Instrument/Probe Type: 2350-1 / 20DT06

Instrument Serial #: 228703

Probe Serial #: 091806C1

Calibration Due Date: 10/22/2011

Reference Area Background Identification #: 513-BKGDS1A Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	11/02/2010 7:32	51
2	11/02/2010 7:34	90
3	11/02/2010 7:35	57
4	11/02/2010 7:36	77
5	11/02/2010 7:38	63
6	11/02/2010 7:39	84
7	11/02/2010 7:40	89
8	11/02/2010 7:41	141
9	11/02/2010 7:42	71
10	11/02/2010 7:44	46
11	11/02/2010 7:45	76
12	11/02/2010 7:46	65
13	11/02/2010 7:48	58
14	11/02/2010 7:49	65
15	11/02/2010 7:50	67
16	11/02/2010 7:51	81
17	11/02/2010 7:52	72
18	11/02/2010 7:54	56
19	11/02/2010 7:55	62
20	11/02/2010 7:56	65

Gamma Mean Background (cpm): 72

Standard Deviation: 20

Gamma 3 σ Investigation
Level (cpm): 133



TETRATECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Exposure Rate Measurements

Page 1

Site Area: 707 Survey Unit: 9 Class: 1 Area: 886.82 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Instrument Model:	Model 19	Reference Area Background Identification #:	421-BKGDS1
Instrument Serial Number:	167145	Reference Area Background Location:	Parcel D-1 Reference
Instrument Calibration Due Date:	3/5/2011	Exposure Rate Background (μ R/hr):	5

Rdg #	Date	Exposure Rate (μ R/hr)	Comments
1	11/22/2010	6	
2	11/22/2010	6	
3	11/22/2010	6	
4	11/22/2010	7	
5	11/22/2010	7	
6	11/22/2010	7	
7	11/22/2010	6	
8	11/22/2010	6	
9	11/22/2010	6	
10	11/22/2010	7	
11	11/22/2010	6	
12	11/22/2010	6	
13	11/22/2010	7	
14	11/22/2010	6	
15	11/22/2010	6	
16	11/22/2010	6	
17	11/22/2010	7	
18	11/22/2010	8	
19	11/22/2010	8	
20	11/22/2010	8	
21	11/30/2010	7	
22	11/30/2010	8	
23	11/30/2010	8	
24	11/30/2010	7	
25	11/30/2010	7	
26	11/30/2010	8	
27	11/30/2010	7	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Exposure Rate Measurements

Page 2

Rdg #	Date	Exposure Rate (μ R/hr)	Comments
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28	1/7/2011	5	
29	1/7/2011	6	
30	1/7/2011	7	
31	1/20/2011	6	
32	1/20/2011	6	
33	2/16/2011	5	
34	2/16/2011	5	

Instrument Model: Model 19
Instrument Serial Number: 207505
Instrument Calibration Due Date: 2/24/2012

Reference Area Background Identification #: 578-BKGDS1
Reference Area Background Location: Parcel D-1 Reference
Exposure Rate Background (μ R/hr): 5

Rdg #	Date	Exposure Rate (μ R/hr)	Comments
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35	3/8/2011	6	
36	3/8/2011	6	
37	3/8/2011	4	
38	3/8/2011	6	
39	3/8/2011	6	
40	3/8/2011	6	
41	3/8/2011	6	
42	3/8/2011	6	
43	3/8/2011	6	
44	3/8/2011	6	
45	3/8/2011	6	
46	3/8/2011	6	
47	3/8/2011	6	
48	3/8/2011	6	
49	3/8/2011	6	
50	3/8/2011	6	
51	3/8/2011	6	
52	3/8/2011	6	
53	3/8/2011	6	
54	3/8/2011	6	
55	5/5/2011	6	



Rdg #	Date	Exposure Rate (μ R/hr)	Comments
56	5/5/2011	6	
57	5/5/2011	6	
58	5/5/2011	5	
59	6/8/2011	5	
60	6/8/2011	5	
61	6/8/2011	5	
62	6/8/2011	5	
63	6/8/2011	5	
64	6/8/2011	5	
65	6/8/2011	5	
66	6/8/2011	5	
67	6/8/2011	5	
68	6/8/2011	5	
69	6/8/2011	5	
70	6/8/2011	5	
71	6/8/2011	5	
72	6/8/2011	5	
73	6/8/2011	5	
74	6/8/2011	5	
75	6/8/2011	5	
76	6/8/2011	6	
77	6/8/2011	6	
78	6/8/2011	6	

Exposure Rate Min: 4.00
Summary (μ R/hr) Avg: 6.00
 Max: 8.00
 St Dev: 0.88



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS01726

JARS

Project Name Radiological Building Survey		PO Number N/A		Project Information Section									
Project Location HUNTERS POINT		Project Number 3670-003		LABORATORY NAME ONSITE - NWT									
Sampler Name JEFF ROLFE		Airbill Number N/A		LABORATORY ID									
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592											
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T 1 7	G A M A S P E C	S R 9 0	A L P H A	COMMENTS	LOCATION	DEPTH START END	QC
03707-S0009-F001-01	11/22/2010	0735	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0009-F002-01	11/22/2010	0740	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0009-F003-01	11/22/2010	0745	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0009-F004-01	11/22/2010	0750	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0009-F005-01	11/22/2010	0755	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0009-F006-01	11/22/2010	0800	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0009-F007-01	11/22/2010	0805	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0009-F008-01	11/22/2010	0810	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0009-F009-01	11/22/2010	0815	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0009-F010-01	11/22/2010	0820	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0009-F011-01	11/22/2010	0825	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0009-F012-01	11/22/2010	0830	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				

Relinquished by: (signature) Jeff Rolfe		Date 11-22-10	Received by: (signature) JARS	
Company RARS	Time 1508	Company NWT	COMPOSITE DESCRIPTION	
Relinquished by: (signature)		Date	SAMPLE CONDITION: COOLER SEAL:	
Company	Time	Company	TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:	
Relinquished by: (signature)		Date	SAMPLING COMMENTS	
Company	Time	Company	BUILDING 707 TRIANGLE SUEVEY UNIT 9 SYSTEMATIC 1-20	
			RACELE	



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 01727

JALS

Project Name Radiological Building Survey		PO Number N/A		Project Information Section													
Project Location HUNTERS POINT		Project Number 3670-003		LABORATORY NAME ONSITE - NWT													
Sampler Name JEFF ROLFE		Airbill Number N/A		LABORATORY ID													
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592															
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	G	A	M	A	S	P	E	C	COMMENTS	LOCATION	DEPTH START END	QC
03707-S0009-F013-01	11/22/2010	0835	1		S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
03707-S0009-F014-01	11/22/2010	0840	1		S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
03707-S0009-F015-01	11/22/2010	0845	1		S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
03707-S0009-F016-01	11/22/2010	0850	1		S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
03707-S0009-F017-01	11/22/2010	0920	1		S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
03707-S0009-F018-01	11/22/2010	0925	1		S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
03707-S0009-F019-01	11/22/2010	0930	1		S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
03707-S0009-F020-01	11/22/2010	0935	1		S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				

Relinquished by: (signature) Jeff Rolfe	Date 11-22-10	Received by: (signature) Lisa Bienkowski	LABORATORY INSTRUCTIONS/COMMENTS	SAMPLING COMMENTS
Company RSR	Time 1508	Company NWT	COMPOSITE DESCRIPTION	BUILDING 707 TRIANGLE SURVEY UNIT 9 SYSTEMATIC 1-20
Relinquished by: (signature)	Date	Received by: (signature)	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)	PARCEL E
Company	Time	Company	TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:	
Relinquished by: (signature)	Date	Received by: (signature)		
Company	Time	Company		



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS01746

Bags

Project Name Radiological Building Survey		PO Number N/A		LABORATORY NAME ONSITE - NWT		Project Information Section							
Project Location HUNTERS POINT		Project Number 3670-003		LABORATORY ID									
Sampler Name J. Rolfe		Airbill Number N/A											
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592											
SAMPLE ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	G A M M A S P E C	S R 9 0	A L P H A	COMMENTS	LOCATION	DEPTH START END	QC
03707-S0009-F021-01	11/30/2010	0920	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0009-F022-01	11/30/2010	0925	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0009-F023-01	11/30/2010	0930	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0009-F024-01	11/30/2010	0935	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0009-F025-01	11/30/2010	0940	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0009-F026-01	11/30/2010	0945	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0009-F027-01	11/30/2010	0950	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				

Relinquished by: (signature) Lisa Bienkowski	Date 11-30-10	Received by: (signature) [Signature]	LABORATORY INSTRUCTIONS/COMMENTS 2 Bags / Sample	SAMPLING COMMENTS BUILDING 707 TRIANGLE SUBLEY UNIT 9 BIASED 21-27
Company RSRS	Time 15:10	Company NWT	COMPOSITE DESCRIPTION	
Relinquished by: (signature)	Date	Received by: (signature)	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY) TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:	
Company	Time	Company		
Relinquished by: (signature)	Date	Received by: (signature)		
Company	Time	Company		



TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS01819

Project Name Radiological Building Survey		PO Number N/A		Project Information Section																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
Project Location HUNTERS POINT		Project Number 3670-0003		LABORATORY NAME ONSITE - RSRs																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
Sampler Name R. Zabevalsky		Airbill Number N/A		LABORATORY ID																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
Project Chemist LISA BIENKOWSKI		Project Chain of Custody Phone 949-756-7592																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000	1001	1002	1003	1004	1005	1006	1007	1008	1009	1010	1011	1012	1013	1014	1015	1016	1017	1018	1019	1020	1021	1022	1023	1024	1025	1026	1027	1028	1029	1030	1031	1032	1033	1034	1035	1036	1037	1038	1039	1040	1041	1042	1043	1044	1045	1046	1047	1048	1049	1050	1051	1052	1053	1054	1055	1056	1057	1058	1059	1060	1061	1062	1063	1064	1065	1066	1067	1068	1069	1070	1071	1072	1073	1074	1075	1076	1077	1078	1079	1080	1081	1082	1083	1084	1085	1086	1087	1088	1089	1090	1091	1092	1093	1094	1095	1096	1097	1098	1099	1100	1101	1102	1103	1104	1105	1106	1107	1108	1109	1110	1111	1112	1113	1114	1115	1116	1117	1118	1119	1120	1121	1122	1123	1124	1125	1126	1127	1128	1129	1130	1131	1132	1133	1134	1135	1136	1137	1138	1139	1140	1141	1142	1143	1144	1145	1146	1147	1148	1149	1150	1151	1152	1153	1154	1155	1156	1157	1158	1159	1160	1161	1162	1163	1164	1165	1166	1167	1168	1169	1170	1171	1172	1173	1174	1175	1176	1177	1178	1179	1180	1181	1182	1183	1184	1185	1186	1187	1188	1189	1190	1191	1192	1193	1194	1195	1196	1197	1198	1199	1200	1201	1202	1203	1204	1205	1206	1207	1208	1209	1210	1211	1212	1213	1214	1215	1216	1217	1218	1219	1220	1221	1222	1223	1224	1225	1226	1227	1228	1229	1230	1231	1232	1233	1234	1235	1236	1237	1238	1239	1240	1241	1242	1243	1244	1245	1246	1247	1248	1249	1250	1251	1252	1253	1254	1255	1256	1257	1258	1259	1260	1261	1262	1263	1264	1265	1266	1267	1268	1269	1270	1271	1272	1273	1274	1275	1276	1277	1278	1279	1280	1281	1282	1283	1284	1285	1286	1287	1288	1289	1290	1291	1292	1293	1294	1295	1296	1297	1298	1299	1300	1301	1302	1303	1304	1305	1306	1307	1308	1309	1310	1311	1312	1313	1314	1315	1316	1317	1318	1319	1320	1321	1322	1323	1324	1325	1326	1327	1328	1329	1330	1331	1332	1333	1334	1335	1336	1337	1338	1339	1340	1341	1342	1343	1344	1345	1346	1347	1348	1349	1350	1351	1352	1353	1354	1355	1356	1357	1358	1359	1360	1361	1362	1363	1364	1365	1366	1367	1368	1369	1370	1371	1372	1373	1374	1375	1376	1377	1378	1379	1380	1381	1382	1383	1384	1385	1386	1387	1388	1389	1390	1391	1392	1393	1394	1395	1396	1397	1398	1399	1400	1401	1402	1403	1404	1405	1406	1407	1408	1409	1410	1411	1412	1413	1414	1415	1416	1417	1418	1419	1420	1421	1422	1423	1424	1425	1426	1427	1428	1429	1430	1431	1432	1433	1434	1435	1436	1437	1438	1439	1440	1441	1442	1443	1444



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

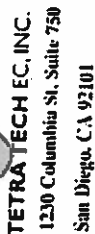
BFS 01828

Page 1 of 1

Bag

Project Name Radiological Building Survey		PO Number N/A		LABORATORY NAME ONSITE - RSRS		Project Information Section	
Project Location HUNTERS POINT		Project Number 3670-0003		LABORATORY ID			
Sampler Name Anthony Smith		Airbill Number N/A					
Project Chemist LISA BIENKOWSKI		Project Contact Phone 949-756-7592					
SAMPLE ID	DATE	TIME	CONTAINERS	LEVEL	TYPE	1	2
03707-S0009-F031-01	1/20/2011	1005	1		S	<input checked="" type="checkbox"/>	<input type="checkbox"/>
03707-S0009-F032-01	1/20/2011	1010	1		S	<input checked="" type="checkbox"/>	<input type="checkbox"/>
						COMMENTS	LOCATION
						DEPTH	QC
						START	END

Relinquished by: (signature) Anthony Smith	Date 1-20-11	Received by: (signature) [Signature]	LABORATORY INSTRUCTIONS/COMMENTS	SAMPLING COMMENTS B407 TRIANGLE FSS SU-9 POST-REMEDIATION 31-32
Company RSRS	Time 1414	Company RSRS		
Relinquished by: (signature)	Date	Received by: (signature)	COMPOSITE DESCRIPTION	
Company	Time	Company		
Relinquished by: (signature)	Date	Received by: (signature)	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)	
Company	Time	Company	TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:	



Chain-of-Custody Record

BFS 01862

Project Name: Radiological Building Survey		PO Num1		N/A		Project Information Section																																																																																																																																																																																																																																																																																																																																																																																																																																														
Project Location: HUNTERS POINT		Project Name:		3670-0003		LABORATORY NAME ONSITE - RSRS																																																																																																																																																																																																																																																																																																																																																																																																																																														
Sample Name: <i>P. Zahensky</i>		Airbill No.:		N/A		LABORATORY ID																																																																																																																																																																																																																																																																																																																																																																																																																																														
Project Chemist: LISA BIENKOWSKI		Project Contact Phone:		949-756-7592																																																																																																																																																																																																																																																																																																																																																																																																																																																
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431

Relinquished by: (signature) <i>[Signature]</i>	Date 2.16.11	Received by: (signature) <i>[Signature]</i>	LABORATORY INSTRUCTIONS/COMMENTS	SAMPLING COMMENTS B707 TRIANGLE FSS SU-9 POST-REMEDIATION 33-34
Company RERS	Time 15.00	Company RERS		
Relinquished by: (signature)	Date	Received by: (signature)		
Company	Time	Company		
Relinquished by: (signature)	Date	Received by: (signature)	COMPOSITE DESCRIPTION	
Company	Time	Company		
Relinquished by: (signature)	Date	Received by: (signature)	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY) TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:	
Company	Time	Company		



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 01908

Project Name Radiological Building Survey		PO Number N/A		LABORATORY NAME ONSITE - RSRS		Project Information Section						
Project Location HUNTERS POINT		Project Number 3670-0003		LABORATORY ID								
Sampler Name R. Zahensky		Airbill Number N/A										
Project Chemist LISA BIENKOWSKI		Project Contact Phone 949-756-7592										
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	G A M M A S P E C	S R D	A L P H A	COMMENTS	LOCATION	DEPTH START END	QC
03707-S0009-F035-01	3/8/2011	1032	1		S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0009-F036-01	3/8/2011	1035	1		S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0009-F037-01	3/8/2011	1040	1		S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0009-F038-01	3/8/2011	1045	1		S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0009-F039-01	3/8/2011	1050	1		S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0009-F040-01	3/8/2011	1055	1		S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0009-F041-01	3/8/2011	1100	1		S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0009-F042-01	3/8/2011	1105	1		S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0009-F043-01	3/8/2011	1110	1		S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0009-F044-01	3/8/2011	1115	1		S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0009-F045-01	3/8/2011	1120	1		S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0009-F046-01	3/8/2011	1125	1		S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				

Relinquished by: (signature) Company		Received by: (signature) Company		LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS	
Time 15:30		Time 15:30		COMPOSITE DESCRIPTION		B707 TRIANGLE FBS	
Date		Date		SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)		SU-9	
Time		Time		TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:		SYSTEMATIC 35-54	
Date		Date					
Time		Time					
Date		Date					
Time		Time					



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 01909

Project Name Radiological Building Survey		PO Number N/A		Project Number 3670-0003		Project Information Section	
Project Location HUNTERS POINT		Project Number N/A		Project Information Section		LABORATORY NAME ONSITE - RSRS	
Sampler Name R. Zahensky		Project Number 949-756-7592		LABORATORY ID		LABORATORY ID	
Project Chemist LISA BIENKOWSKI		Project Number 949-756-7592		LABORATORY ID		LABORATORY ID	
SAMPLE_ID	DATE	TIME	CONTAINERS	LEVEL	TYPE	START	END
03707-S0008-F047-01	3/8/2011	1130	1		S		
03707-S0008-F048-01	3/8/2011	1135	1		S		
03707-S0008-F049-01	3/8/2011	1140	1		S		
03707-S0008-F050-01	3/8/2011	1145	1		S		
03707-S0008-F051-01	3/8/2011	1150	1		S		
03707-S0008-F052-01	3/8/2011	1240	1		S		
03707-S0008-F053-01	3/8/2011	1245	1		S		
03707-S0008-F054-01	3/8/2011	1250	1		S		
COMMENTS		LOCATION		DEPTH		QC	

Relinquished by: (signature) R. Zahensky		Date 3/8/11		Received by: (signature) R. Zahensky	
Company RSRS		Time 15:30		Company RSRS	
Relinquished by: (signature)		Date		Received by: (signature)	
Company		Time		Company	
Relinquished by: (signature)		Date		Received by: (signature)	
Company		Time		Company	
LABORATORY INSTRUCTIONS/COMMENTS				COMPOSITE DESCRIPTION	
SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)				TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:	
SAMPLING COMMENTS					



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 01958

Project Name Radiological Building Survey		PO Number N/A		LABORATORY NAME ONSITE - RSRS		Project Information Section			
Project Location HUNTERS POINT		Project Number 3670-0003		LABORATORY ID					
Sample Name R. Zahensky		Airbill Number N/A							
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592							
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	COMMENTS	LOCATION	SAMPLE ID
03707-S0009-F055-01	5/5/2011	1335	1		S				
03707-S0009-F056-01	5/5/2011	1340	1		S				
03707-S0009-F057-01	5/5/2011	1345	1		S				
03707-S0009-F058-01	5/5/2011	1400	1		S				

Relinquished by: (signature) R. Zahensky		Date 5.5.11		Received by: (signature) R. Zahensky		LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS	
Company RSRS		Time 16:10		Company RSRS		COMPOSITE DESCRIPTION		B77 TRINXALE AREA	
Relinquished by: (signature)		Date		Received by: (signature)				5290 Post. REMEDIATION	
Company		Time		Company				50-09 4 55-58	
Relinquished by: (signature)		Date		Received by: (signature)		SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)			
Company		Time		Company		TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:			



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 01988

Project Name Radiological Building Survey		PO Number N/A		G S A L P H A A R 9 0 M A S P E C		LABORATORY NAME ONSITE - RSRs		Project Information Section	
Project Location HUNTERS POINT		Project Number 3670-0003				LABORATORY ID			
Sampler Name J. Rolfe		Airbill Number N/A							
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592							
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	COMMENTS	LOCATION	SAMPLE ID
03707-S0009-F059-01	6/8/2011	0815	1		S	<input checked="" type="checkbox"/>			
03707-S0009-F060-01	6/8/2011	0820	1		S	<input checked="" type="checkbox"/>			
03707-S0009-F061-01	6/8/2011	0825	1		S	<input checked="" type="checkbox"/>			
03707-S0009-F062-01	6/8/2011	0830	1		S	<input checked="" type="checkbox"/>			
03707-S0009-F063-01	6/8/2011	0835	1		S	<input checked="" type="checkbox"/>			
03707-S0009-F064-01	6/8/2011	0840	1		S	<input checked="" type="checkbox"/>			
03707-S0009-F065-01	6/8/2011	0845	1		S	<input checked="" type="checkbox"/>			
03707-S0009-F066-01	6/8/2011	0850	1		S	<input checked="" type="checkbox"/>	Dup		
03707-S0009-F067-01	6/8/2011	0925	1		S	<input checked="" type="checkbox"/>			
03707-S0009-F068-01	6/8/2011	0930	1		S	<input checked="" type="checkbox"/>			
03707-S0009-F069-01	6/8/2011	0935	1		S	<input checked="" type="checkbox"/>			
03707-S0009-F070-01	6/8/2011	0940	1		S	<input checked="" type="checkbox"/>			

Relinquished by: (signature) J. Rolfe		Date 6-8-11	Received by: (signature) C. Caspary	
Company RSRS		Time 1350	Company RSRS	
Relinquished by: (signature)		Date	Received by: (signature)	
Company		Time	Company	
Relinquished by: (signature)		Date	Received by: (signature)	
Company		Time	Company	

LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS 3707 TRANSFER WENTFS SU-9 SYSTEMATIC SA-78	
COMPOSITE DESCRIPTION			
SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY) TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:			



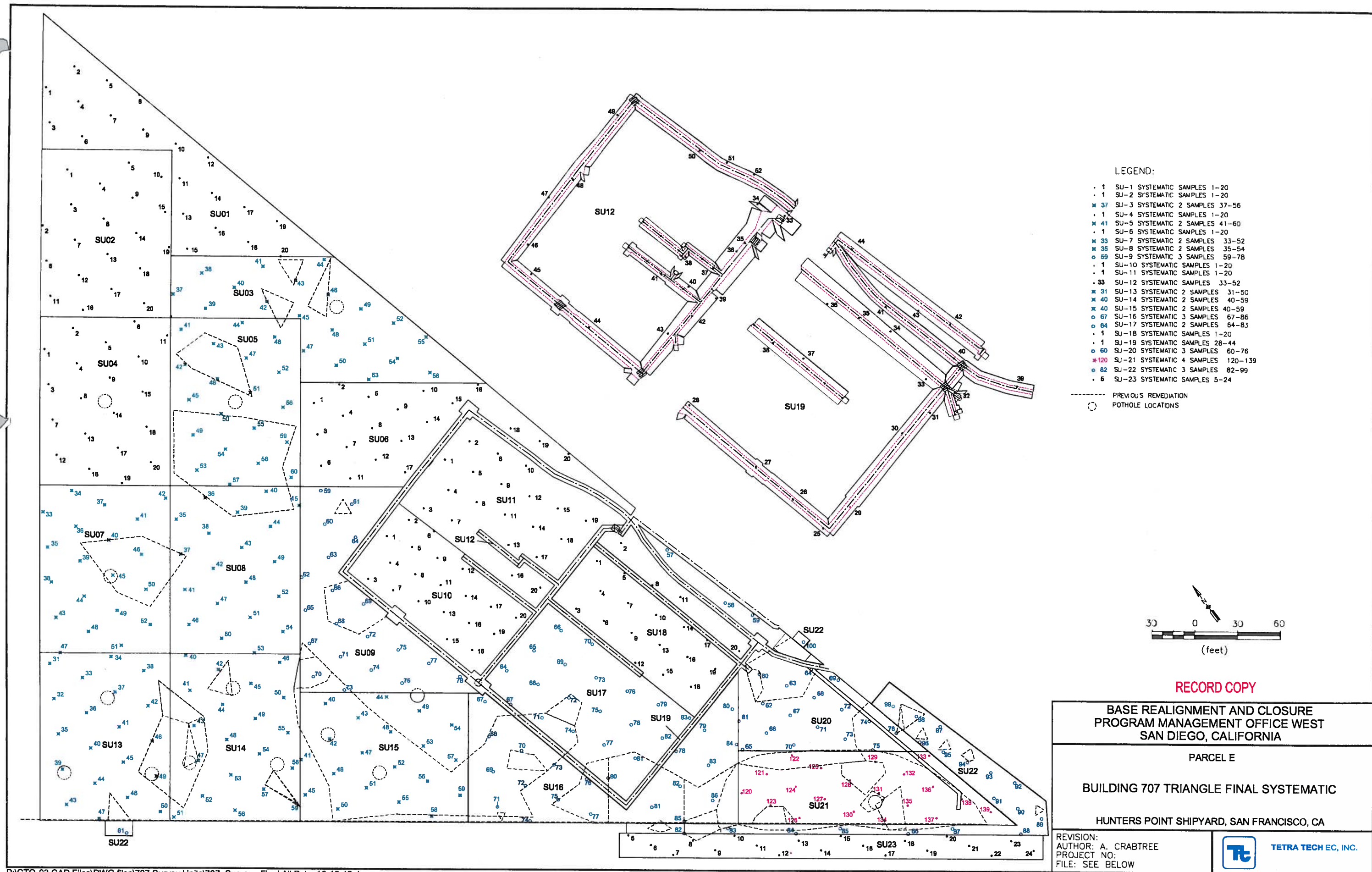
TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

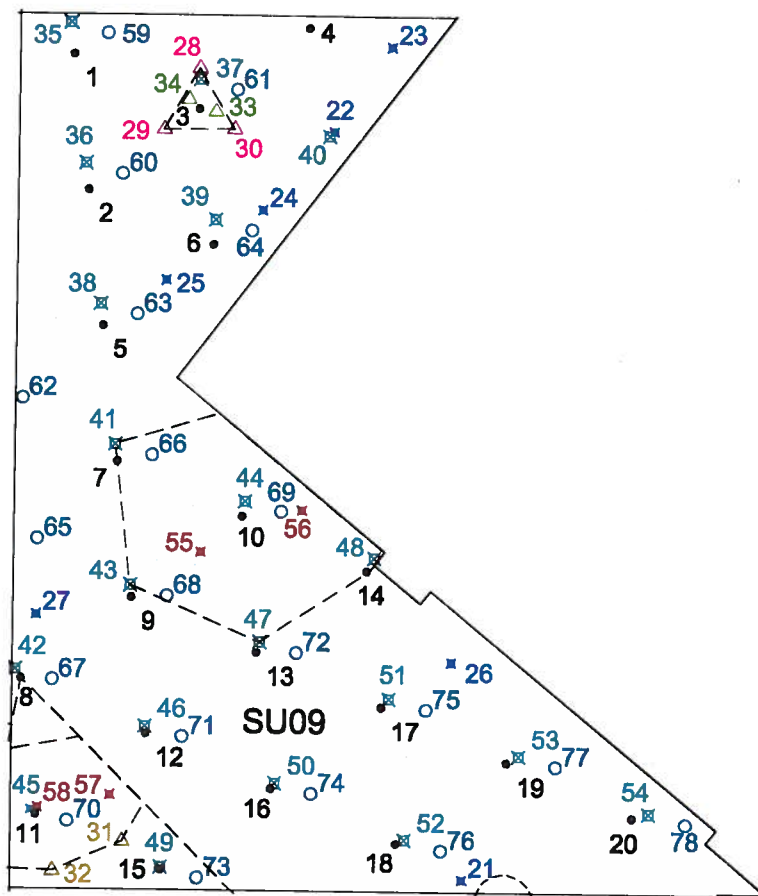
BFS 01989

Project Name Radiological Building Survey		PO Number N/A		LABORATORY NAME ONSITE - RSRS		Project Information Section		
Project Location HUNTERS POINT		Project Number 3670-0003		LABORATORY ID				
Sampler Name <i>R. Rolfe</i>		Airbill Number N/A						
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592						
SAMPLE ID	DATE	TIME	Containers	LEVEL	TYPE	COMMENTS	LOCATION	SAMPLE ID
03707-S0009-F071-01	6/8/2011	0945	1		S			
03707-S0009-F072-01	6/8/2011	0950	1		S			
03707-S0009-F073-01	6/8/2011	0955	1		S			
03707-S0009-F074-01	6/8/2011	1000	1		S			
03707-S0009-F075-01	6/8/2011	1005	1		S			
03707-S0009-F076-01	6/8/2011	1010	1		S			
03707-S0009-F077-01	6/8/2011	1015	1		S			
03707-S0009-F078-01	6/8/2011	1020	1		S			

Relinquished by: (signature) <i>[Signature]</i>		Date	6-8-11	Received by: (signature) <i>[Signature]</i>		LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS	
Company		Time	1350	Company		COMPOSITE DESCRIPTION			
Relinquished by: (signature)		Date		Received by: (signature)					
Company		Time		Company					
Relinquished by: (signature)		Date		Received by: (signature)		SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)			
Company		Time		Company		TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:			



P:\CTO-03 CAD FILES\DWG FILES\707 SURVEY UNITS\707_SURVEY _10-15-12.DWG
 PLOT/UPDATE: OCT 18 2012 10:30:06



LEGEND:

- 1 SYSTEMATIC 1 SAMPLES 1-20
- ⊠ 21 BIASED SAMPLES 21-27
- △ 28 CHARACTERIZATION 1 SAMPLES 28-30
- △ 31 POST REMEDIATION 1 SAMPLES 31-32
- △ 33 POST REMEDIATION 2 SAMPLES 33-34
- ⊠ 41 SYSTEMATIC 2 SAMPLES 35-54
- ⊠ 33 POST REMEDIATION 3 SAMPLES 55-58
- 59 SYSTEMATIC 3 SAMPLES 59-78
- PREVIOUS REMEDIATION

RECORD COPY

SCALE 1:30

HUNTERS POINT SHIPYARD
SAN FRANCISCO, CA
 P.O. BOX 884836
 SAN FRANCISCO, CA 94188

BUILDING 707
SURVEY UNIT 9



TETRA TECH EC, INC
 1230 COLUMBIA STREET, SUITE 750
 SAN DIEGO, CA 92101
 TEL: (619) 234-8690 FAX: (619) 234-8591



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: November 22, 2010	RAD EMAC – CTO 002
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Overview

The HPS Team continued field activities in Buildings 203, 241, 271 and 272, and Work Area #33. Details of the work activities performed are provided in the sections below.

Building 203

Pre-survey activities were continued by the HPS Team with the investigation of floor drains for traces of Hg contamination.

Building 241

Pre-survey activities were continued by the HPS Team with the investigation of floor drains for traces of mercury contamination and measuring proposed Class 1 survey areas.

Building 271

Pre-survey activities were continued by the HPS Team with the investigation of floor drains for traces of mercury contamination and the ongoing removal of interior walls and radiological surface scans of generated metal and wood debris; no contamination was identified during the scanning activities.

Building 272

Pre-survey activities were continued by the HPS Team with the investigation of floor drains for traces of mercury contamination.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

A variety of housekeeping activities were performed throughout Parcel C by the HPS Team including street sweeping.

Issues/Items Pending Action

Internal Draft Removal Action Completion Report
Task-specific Plans approval



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel E and Utility Corridor 3 (UC3) Storm Drain and Sanitary Sewer Removal Action

Report Date: November 22, 2010	EMAC – CTO 03
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Overview

The HPS Team continued field activities in the Building 707 Triangle Area, Scrap Yard, UC3, and Work Areas #16, #21 and #22. Details of the work activities performed are provided in the sections below.

Building 707 Triangle Area

The HPS Team performed Class 1 survey activities in Survey Unit 9. A total of 40 gamma static measurements were logged. The maximum gamma static measurements logged were 90 cpm for the FIDLER and 8,423 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

The HPS Team performed Class 1 survey activities in Survey Unit 16. A total of 40 gamma static measurements were logged. The maximum gamma static measurements logged were 109 cpm for the FIDLER and 8,502 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

Scrap Yard

Following a review of analytical results from Survey Unit 5, staged asphalt debris from Grids 18, 20 and 22 were transferred to the recycling stockpile.

Parcel E/UC3 Storm Drain and Sanitary Sewer Removal Activities

The HPS Team and the RASO concurred with backfilling Trench Unit No. 182.

A variety of housekeeping activities were performed throughout Parcel E and UC3 by the HPS Team including street sweeping.

Issues/Items Pending Action

Internal Draft Removal Action Completion Report
Task-specific Plans approval

DAILY STATUS REPORT
HPS Base-Wide Activities

Report Dates: November 22, 2010

RAC V

Overview

The HPS team continued with Base-wide activities under CTO 18. Active work areas currently consist of Parcel B, Parcel C, Parcel D-1, Parcel E, Parcel G and Utility Corridor 3. Work performed, including support provided to other HPS contractors, is detailed within the categories that follow:

HPS Site-wide Activities

Start of shift:

- + Restricted areas unlocked/established for daily activities: complete
- + Operational check prerequisites for project field instrumentation/machinery/equipment use: complete

NRC license compliance:

- + Attendance for regularly scheduled radiological awareness brief (Monday's): 0
- + Dosimetry assignments completed in support of radiologically controlled work tasks: 0
- + Routine radiological surveys: Daily - 3; Weekly - 14; Monthly - 0
- + Radiological status surveys (equipment and material): incoming - 0; outgoing - 0; truck portal - 0
- + Radiological postings - upkeep and maintenance: ongoing

Radiological oversight, support, and field coverage (other contractors):

- + Kleinfelder - Sampling activities at groundwater monitoring wells (miscellaneous Basewide locations)

End of shift:

- + Project field instrument/machinery/equipment accountability and inventory status: complete
- + Restricted areas secured for day: complete

On-site Radiological Laboratory Activities

Laboratory technicians worked two shifts and supported document control and review, bin inventories, and housekeeping activities.

Gamma spectroscopy detectors available and operational for analytical analysis needs: 8

Protean units available and operational for analytical analysis needs: 1 (Friday and Saturday)

Samples analyzed:

- + Protean swipe samples - 125
- + Protean air monitoring media - 3
- + Gamma spectroscopy samples - 72

Total number of gamma spectroscopy samples recounted:

- + Soil samples - 22

Total number of samples in process or awaiting analysis:

- + Gamma spectroscopy samples - 733

Other:

- + Samples sent for offsite analysis - 60 (Tetra Tech)

Note: + Samples processed for Alameda: 0

+ Samples processed for HPS:

- Shaw D1: 0
- Shaw PCB: 0
- ERRG: 0

RSY2

Radiological monitoring/control point support (personnel/area/equipment/material egress/decon pad/air monitoring).

Excavated soil (ES) pile ES349, Pad C07; stockpiling pad contents pending receipt of Sr-90 analytical results: ongoing

ES pile ES354, Pad C10; stockpiling pad contents pending receipt of Sr-90 analytical results: ongoing

ES pile ES 355, Pad C09; preliminary preparation for systematic and biased sampling: ongoing

ES pile ES 358, Pad C21; systematic and biased sampling activities: complete

ES pile ES 361, Pad C22; systematic and biased sampling activities: complete

Receiving soil from Shaw work area (WA) 24 as ES pile ES 364, Pad C26: ongoing

RSY3:

No activities planned / conducted

RSY4:

No activities planned / conducted

RASO Notification, Approval and Survey/Sample Results

Received concurrence specific to: "Parcel UC 3 Backfilling Operations at WA 16, Trench Unit 182.

HPS LLRW Bin Activities

Empty bins staged for active use: 0

Bins receiving material in support of day's activities: 0

Bins receiving radiological assessment; resulting samples submitted to on-site analytical lab: 0

Prior week's bin count transferred to EMS for storage in the Parcel C bin storage area (reported every Monday): N/A

Support to Other Contracts / Organizations

Provided radiological field coverage for:

+ Kleinfelder

Provided analytical laboratory services for:

+ N/A



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: November 30, 2010	RAD EMAC – CTO 002
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Overview

The HPS Team continued field activities in Building 271 and Work Area #33. Details of the work activities performed are provided in the sections below.

Building 271

The HPS Team completed dismantling the radiologically cleared and released ventilation hood (M&E Survey #HPS-ME-B271-002) and transferred the hood sections to Building 281 for storage.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

A variety of housekeeping activities were performed throughout Parcel C by the HPS Team including street sweeping.

Issues/Items Pending Action

Internal Draft Removal Action Completion Report
Task-specific Plans approval



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel E and Utility Corridor 3 (UC3) Storm Drain and Sanitary Sewer Removal Action

Report Date: November 30, 2010	EMAC – CTO 03
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Overview

The HPS Team continued field activities in the Building 707 Triangle Area, UC3, and Work Areas #16 and #21. Details of the work activities performed are provided in the sections below.

Building 707 Triangle Area

The HPS Team performed Class 1 survey activities in Survey Unit 1. A total of 18 biased gamma static measurements were logged. The maximum biased gamma static measurements logged were 83 cpm for the FIDLER and 7,726 cpm. In addition, 9 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

The HPS Team performed Class 1 survey activities in Survey Unit 6. A total of 10 biased gamma static measurements were logged. The maximum biased gamma static measurements logged were 91 cpm for the FIDLER and 7,608 cpm. In addition, 5 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

The HPS Team performed Class 1 survey activities in Survey Unit 9. A total of 14 biased gamma static measurements were logged. The maximum biased gamma static measurements logged were 95 cpm for the FIDLER and 8,746 cpm. In addition, 7 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

The HPS Team performed Class 1 survey activities in Survey Unit 10. A total of 20 biased gamma static measurements were logged. The maximum biased gamma static measurements logged were 190 cpm for the FIDLER and 8,419 cpm. In addition, 10 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

The HPS Team performed Class 1 survey activities in Survey Unit 11. A total of 24 biased gamma static measurements were logged. The maximum biased gamma static measurements logged were 158 cpm for the FIDLER and 8,201 cpm. In addition, 12 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

The HPS Team performed Class 1 survey activities in Survey Unit 17. A total of 32 biased gamma static measurements were logged. The maximum biased gamma static measurements logged were 220 cpm for the FIDLER and 9,743 cpm. In addition, 16 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

Parcel E/UC3 Storm Drain and Sanitary Sewer Removal Activities

Backfilling activities were initiated for Trench Unit No. 183 by the HPS Team.

The HPS Team provided the RASO with the Internal Draft SUPR for Trench Unit No. 187 along with a request for concurrence to backfill.

A variety of housekeeping activities were performed throughout Parcel E and UC3 by the HPS Team including street sweeping.

Issues/Items Pending Action

Internal Draft Removal Action Completion Report
Task-specific Plans approval

DAILY STATUS REPORT
HPS Base-Wide Activities

Report Dates: November 30, 2010

RAC V

Overview

The HPS team continued with Base-wide activities under CTO 18. Active work areas currently consist of Parcel B, Parcel C, Parcel D-1, Parcel E, Parcel G and Utility Corridor 3. Work performed, including support provided to other HPS contractors, is detailed within the categories that follow:

HPS Site-wide Activities

Start of shift:

- + Restricted areas unlocked/established for daily activities: completed.
- + Operational check prerequisites for project field instrumentation/machinery/equipment use: completed.

NRC license compliance:

- + Attendance for regularly scheduled radiological awareness brief (Monday's): N/A
- + Dosimetry assignments completed in support of radiologically controlled work tasks: 0
- + Routine radiological surveys: Daily - 3; Weekly - 8; Monthly - 0
- + Radiological status surveys (equipment and material): incoming - 0; outgoing - 0; truck portal - 0
- + Radiological postings - upkeep and maintenance: ongoing

Radiological oversight, support, and field coverage (other contractors):

- + Support for Shaw activities in RSY2 (transfer of ES to pads).
- + Support for Kleinfelder sampling activities at groundwater monitoring wells (miscellaneous Basewide locations).

End of shift:

- + Project field instrument/machinery/equipment accountability and inventory status: completed.
- + Restricted areas secured for day: completed.

On-site Radiological Laboratory Activities

Laboratory technicians worked two shifts and supported document control and review, bin inventories, and housekeeping activities.

Gamma spectroscopy detectors available and operational for analytical analysis needs: 8

Protean units available and operational for analytical analysis needs: 1

Samples analyzed:

- + Protean swipe samples - 24
- + Protean air monitoring media - 5
- + Gamma spectroscopy samples - 85

Total number of gamma spectroscopy samples recounted:

- + Soil samples - 27

Total number of samples in process or awaiting analysis:

- + Gamma spectroscopy samples - 692

Other:

- + Samples sent for offsite analysis - 44 (Tetra Tech)

Note: + Samples processed for Alameda: 0

+ Samples processed for HPS:

- Shaw D1: 13 (gamma spectroscopy with 10 recounts)
- Shaw PCB: 0
- ERRG: 0

RSY2

Radiological monitoring/control point support (personnel/area/equipment/material egress/decon pad/air monitoring).

Preliminary preparations for the systematic and biased sampling of excavated soil (ES) pile ES 348, Pad C 06: ongoing

Preliminary preparations for the towed array survey of ES pile ES 364, Pad C 25: ongoing

ES pile ES 301, Pad C 16; stockpile relocation to SB4 staging area (pad is clear): complete

Excavated soil (ES) pile ES 354, Pad C 10; stockpile relocation to SB3 (Shaw) staging area (pad is clear): complete

Receiving soil from Shaw IR 32 work area (WA) 34 as ES pile ES 366, Pad C 28 (pad is full): complete

Receiving soil from Shaw IR 32 WA 24 as ES pile ES 367, Pad C 29: ongoing

Receiving soil from Shaw IR 32 WA 24 as ES pile ES 368, Pad C 30: ongoing

RSY3:

No activities planned / conducted

RSY4:

Radiological monitoring/control point support (personnel/area/equipment/material egress/decon pad/air monitoring).

ES pile ES 341, Pad E 18; stockpiling activities on pad: ongoing

RASO Notification, Approval and Survey/Sample Results

Forwarded analysis results from the offsite analytical laboratory specific to: "Strontium Sampling at Parcel G, ES Pile ES 311 (currently staged at RSY2, Pad C 28)"; requested concurrence to use entire pile as backfill material.

Forwarded analysis results from the offsite analytical laboratory specific to: "Strontium Sampling at Parcel G, ES Pile ES 314 (currently staged at RSY2, Pad C 31)"; requested concurrence to use entire pile as backfill material.

Forwarded analysis results from the onsite analytical laboratory specific to: "Systematic and Biased Sampling at Parcel G, ES Pile ES 358 (currently staged at RSY2, Pad C 21)"; requested concurrence to clear / stage entire pile pending receipt of strontium analysis results from the offsite analytical laboratory.

Received concurrence specific to: "Systematic and Biased Sampling at Parcel E, ES Pile ES 342 (staged at RSY4, Pad E 17)"; will clear / stage entire pile pending receipt of strontium results from offsite analytical laboratory.

HPS LLRW Bin Activities

Empty bins staged for active use: 0

Bins receiving material in support of day's activities: 1 (Tetra Tech)

Bins receiving radiological assessment; resulting samples submitted to on-site analytical lab: 0

Prior week's bin count transferred to EMS for storage in the Parcel C bin storage area (reported every Monday): N/A

Support to Other Contracts / Organizations

Provided radiological field coverage for:

- + Shaw Environmental
- + Kleinfelder

Provided analytical laboratory services for:

- + Shaw Environmental

DAILY REPORT
HPS RAD EMAC Basewide Status

Report Dates: January 7, 2011

RAC V

Overview

The HPS team continued with Basewide activities under CTO 04. Active work areas currently consist of Parcel B, Parcel C, Parcel D-1, Parcel E, Parcel G and Utility Corridor 3. Work performed, including any support provided to other HPS contractors, is detailed within the categories that follow:

HPS Site-wide Activities

Start of shift:

- + Restricted areas unlocked/established for daily activities: complete
- + Operational check prerequisites for project field instrumentation/machinery/equipment use: complete

NRC license compliance:

- + Attendance for regularly scheduled radiological awareness brief (Monday's): N/A
- + Dosimetry assignments completed in support of radiologically controlled work tasks: 0
- + Routine radiological surveys: Daily - 7; Weekly - 5; Monthly - 0
- + Radiological status surveys (equipment and material): incoming -2; outgoing - 0
- + Radiological truck portal screening: Baseline scans (empty) 0; Full load scans 0
- + Radiological postings (upkeep and maintenance): ongoing

Radiological oversight, support, and field coverage (other contractors):

- + None requested / scheduled

End of shift:

- + Project field instrument/machinery/equipment accountability and inventory status: complete
- + Restricted areas secured for day: complete

Miscellaneous

- + Radiological integrity field verifications: complete.
- + Laboratory waste packages generated / transferred for disposal to RSY bins: 10

On-site Radiological Laboratory Activities

Laboratory technicians worked two shifts and supported document control and review, bin inventories, sample consolidation, and housekeeping activities. Phase out of current gamma spectroscopy hardware to newer upgrade continues; relocation to new onsite facility ongoing.

Gamma spectroscopy detectors available and operational for analytical analysis needs: 0

Protean units available and operational for analytical analysis needs: 1

Samples analyzed:

- + Protean swipe samples - 40
- + Protean air monitoring media - 21
- + Gamma spectroscopy samples - 0

Total number of gamma spectroscopy samples recounted:

- + Soil samples - N/A

Total number of samples in process or awaiting analysis:

- + Gamma spectroscopy samples - 335

Other:

- + Samples sent for offsite analysis - 0

Note: + Samples processed for Alameda: 0

+ Samples processed for HPS:

- Shaw D1: 0
- Shaw PCB: 0
- ERRG: 0

RSY2

Radiological monitoring/control point support (personnel/area/equipment/material egress/decon pad/air monitoring).

Receiving soil from work area (WA) 30 (Shaw) as excavated soil (ES) pile ES 374, Pad C 12 : ongoing

RSY3

Radiological monitoring/control point support (personnel/area/equipment/material egress/air monitoring).

Receiving soil from WA 33 (Shaw) as ES pile ES 375, Pad D 06 : ongoing

RSY4

Radiological monitoring/control point support (personnel/area/equipment/material egress/decon pad/air monitoring).

Receiving soil from WA 33 as ES pile ES 380, Pad E 11: ongoing

HPS LLRW Bin Activities

Empty bins staged for active use: 4 (Tetra Tech)

Bins receiving material in support of day's activities: 6 (Tetra Tech)

Bins receiving radiological assessment; resulting samples submitted to on-site analytical lab: 0

Prior week's bin transfer total to EMS bin storage area in Parcel C (reported every Monday): 3

Support to Other Contracts / Organizations

Provided radiological field coverage for:

+ N/A

Provided analytical laboratory services for:

+ N/A



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: January 7, 2011

RAD EMAC – CTO 002

Overview

The HPS Team continued field activities in Work Area #33. Details of the work activities performed are provided in the sections below.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

The HPS Team excavated approximately 300 cubic yards of soil from Work Area #33 and transferred the material to both RSY3 and RSY4 pending survey activities.

Excavation activities were performed for the following trench segments:

- 02-C33-00-1S 20 linear feet completed
- 02-C33-00-1T 20 linear feet completed
- 02-C33-00-1V 28 linear feet completed
- 02-C33-00-1W 115 linear feet completed
- 02-C33-00-1X 25 linear feet completed
- 02-C33-00-1Z 10 linear feet completed.

A total of 218 linear feet of trench (including excavated soil, pipe, and manholes) identified on the design drawing was completed by the HPS Team.

Manholes MH1113, and MH1114 along with pipe excavated from trench segments 02-C33-00-1S, 02-C33-00-1T, 02-C33-00-1V, 02-C33-00-1W, 02-C33-00-1X, and 02-C33-00-1Z were placed on plastic pending further activities.

Two sediment samples were collected from Manholes MH1113 (MH0002) and MH1114 (MH0003) by the HPS Team and submitted to the on-site laboratory for analysis.

A variety of housekeeping activities were performed throughout Parcel C by the HPS Team including street sweeping.

Issues/Items Pending Action

Internal Draft Removal Action Completion Report
Task-specific Plans approval



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel E and Utility Corridor 3 (UC3) Storm Drain and Sanitary Sewer Removal Action

Report Date: January 7, 2011	EMAC – CTO 03
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Overview

The HPS Team continued field activities in the Building 707 Triangle Area, Scrap Yard, UC3, and Work Areas #16, #20, and #21. Details of the work activities performed are provided in the sections below.

Building 707 Triangle Area

The HPS Team remediated approximately 65 cubic yards of soil from Survey Unit 21 and placed the material in LLRW bins BKRU026148, GFLU001153G6, GFLU001164G12, GFLU001172G15, and GFLU001203 for disposal.

The HPS Team performed Class 1 survey activities in Survey Units 3, 5, 7, 8, 9, 13, 14, and 20. A total of 18 characterization gamma static measurements were logged. The maximum gamma static measurement logged was 7,870 cpm. In addition, 18 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

Scrap Yard

The HPS Team issued drawings to identify locations for post-remediation sample collection in Survey Units 6 and 8.

Parcel E/UC3 Storm Drain and Sanitary Sewer Removal Activities

Backfill activities were continued by the HPS Team in Trench Unit No. 184.

Standing water in UC3 active trenches continued to be pumped in preparation for FSS activities.

A variety of housekeeping activities were performed throughout Parcel E and UC3 by the HPS Team including street sweeping.

Issues/Items Pending Action

Internal Draft Removal Action Completion Report

DAILY REPORT
HPS RAD EMAC Basewide Status

Report Dates: January 20, 2011

RAD EMAC – CTO 04

Overview

The HPS team continued with Basewide activities under CTO 04. Active work areas currently consist of Parcel B, Parcel C, Parcel D-1, Parcel E, Parcel G and Utility Corridor 3. Work performed, including any support provided to other HPS contractors, is detailed within the categories that follow:

HPS Site-wide Activities

Start of shift:

- + Restricted areas unlocked/established for daily activities: complete
- + Operational check prerequisites for project field instrumentation/machinery/equipment use: complete

NRC license compliance:

- + Attendance for regularly scheduled radiological awareness brief (Monday's): N/A
- + Attendance for radiological awareness brief - escorted visitor (short term/task specific): 0
- + Dosimetry assignments completed in support of radiologically controlled work tasks: 0
- + Routine radiological surveys: Daily - 9; Weekly - 3; Monthly - 1; Monthly RMA Inventory performed.
- + Radiological status surveys (equipment and material): incoming - 1; outgoing - 0
- + Radiological truck portal screening: Baseline scans (empty) 0; Full load scans 0
- + Radiological postings (upkeep and maintenance): ongoing

Radiological oversight, support, and field coverage (other contractors):

- + CE2/Kleinfelder: Basewide groundwater sampling project.

End of shift:

- + Project field instrument/machinery/equipment accountability and inventory status: complete
- + Restricted areas secured for day: complete

Miscellaneous

- + Radiological integrity field verifications: complete.
- + Laboratory waste packages generated / transferred for disposal to RSY bins: 0

On-site Radiological Laboratory Activities

Laboratory technicians worked two shifts and supported document control and review, bin inventories, and housekeeping activities. Phase out of current gamma spectroscopy hardware to newer upgrade continues; relocation to new onsite facility ongoing.

Gamma spectroscopy detectors available and operational for analytical analysis needs: 5

Protean units available and operational for analytical analysis needs: 1

Samples analyzed:

- + Protean swipe samples - 70
- + Protean air monitoring media - 11
- + Gamma spectroscopy samples - 42

Total number of gamma spectroscopy samples recounted:

- + Soil samples - 0

Total number of samples in process or awaiting analysis:

- + Gamma spectroscopy samples - 557

Other:

- + Samples sent for offsite analysis - 14 (Tetra Tech)

Note: + Samples processed for Alameda: 0

+ Samples processed for HPS:

- Shaw PD1: 33
- Shaw PCB:
- 03SCR-S0006: 6
- 03SCR-S0007: 3

RSY2

Radiological monitoring/control point support (personnel/area/equipment/material egress/decon pad/air monitoring).

Excavated Soil (ES) pile #394, Pad C20-Receiving soil from work area (WA)/24 (Shaw), 3 truckloads today.

ES pile #366, Pad C28-Ready for towed array.

ES pile #371, Pad C33-Towed array completed.

RSY3

No activities planned or conducted today.

RSY4

Radiological monitoring/control point support (personnel/area/equipment/material egress/decon pad/air monitoring).

ES pile #395, Pad E07-Receiving soil from WA/33, 9 truckloads.

ES pile #392, Pad E17-Receiving soil from WA/33, 11 truckloads today.

ES pile #391, Pad E18-Receiving soil from WA/33, 11 truckloads today, pad is full.

HPS LLRW Bin Activities

Empty bins staged for active use: 0 (Tetra Tech)

Bins receiving material in support of day's activities: 3 (Tetra Tech)

Bins receiving radiological assessment; resulting samples submitted to on-site analytical lab: 0

Prior week's bin transfer total to EMS bin storage area in Parcel C (reported every Monday): N/A

Support to Other Contracts / Organizations

Provided radiological field coverage for:

+ CE2/Kleinfelder: Basewide groundwater sampling project.

Provided analytical laboratory services for:

+ N/A



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: January 20, 2011

RAD EMAC – CTO 002

Overview

The HPS Team continued field activities in Buildings 203, 214 and 271 and Work Area #33. Details of the work activities performed are provided in the sections below.

Building 203

The HPS Team and Sterling Environmental performed a pre-asbestos abatement walkthrough and on-site equipment inventory.

Building 214

The main entryway was relocated to the east-side of Building 214 to facilitate sewer and storm drain removal activities along Lockwood Street.

Building 271

The drying oven, which was radiologically cleared in Material and Equipment Survey #HPS-ME-B271-001, was transferred by the HPS Team to Building 413 for storage.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

The HPS Team excavated approximately 372 cubic yards of soil from Work Area #33 and transferred the material to RSY4 pending survey activities. Excavation activities were performed for the following trench segments:

- 02-C33-00-2Q 16 linear feet completed
- 02-C33-00-2R 22 linear feet completed
- 02-C33-00-2S 13 linear feet completed
- 02-C33-00-8K 20 linear feet completed
- 02-C33-28-1W 42 linear feet completed
- 02-C33-28-1X 35 linear feet completed
- 02-C33-28-1Y 4 linear feet completed
- 02-C33-28-8B 30 linear feet completed.

A total of 132 linear feet of trench (including excavated soil, pipe and manholes) identified on the design drawings and 50 linear feet not identified on the design drawings was completed by the HPS Team.

Manholes MH1052 and MH1060 along with pipe excavated from trench segments 02-C33-00-2Q, -2R, -2S, -8K; 02-C33-28-1W, -1X, -1Y, and -8B were placed on plastic pending disposal activities.

Two sediment samples were collected from Manholes MH1052 (MH0010) and MH1060 (MH0011) by the HPS Team and submitted to the on-site laboratory for analysis.

Asphalt removal activities were continued by the HPS Team in Work Area #33 to facilitate upcoming fieldwork.

A variety of housekeeping activities were performed throughout Parcel C by the HPS Team including street sweeping.

Issues/Items Pending Action

Internal Draft Removal Action Completion Report
Task-specific Plans approval



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel E and Utility Corridor 3 (UC3) Storm Drain and Sanitary Sewer Removal Action

Report Date: January 20, 2011	EMAC – CTO 03
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Overview

The HPS Team continued field activities in the Building 707 Triangle Area, UC3, and Work Areas #16 and #21. Details of the work activities performed are provided in the sections below.

Building 707 Triangle Area

The HPS Team remediated approximately 24 cubic yards of soil from within Class 1 Survey Unit 5 and placed the material in LLRW bins GFLU001236G5 and GFLU001262G15 for disposal by the DON's radiological waste contractor.

The HPS Team performed Class 1 survey activities in Survey Unit 3. A total of 6 post-remediation gamma static measurements were logged. The maximum gamma static measurements logged were 90 cpm for the FIDLER and 5,444 cpm. In addition, three post-remediation soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

The HPS Team performed Class 1 survey activities in Survey Unit 5. A total of 8 post-remediation gamma static measurements were logged. The maximum gamma static measurements logged were 85 cpm for the FIDLER and 6,166 cpm. In addition, four post-remediation soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

The HPS Team performed Class 1 survey activities in Survey Unit 9. A total of 4 post-remediation gamma static measurements were logged. The maximum gamma static measurements logged were 105 cpm for the FIDLER and 7,609 cpm. In addition, two post-remediation soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

The HPS Team performed Class 1 survey activities in Survey Unit 13. A total of 4 post-remediation gamma static measurements were logged. The maximum gamma static measurements logged were 86 cpm for the FIDLER and 6,079 cpm. In addition, two post-remediation soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

The HPS Team performed Class 1 survey activities in Survey Unit 14. A total of 4 post-remediation gamma static measurements were logged. The maximum gamma static measurements logged were 183 cpm for the FIDLER and 5,337 cpm. In addition, two

post-remediation soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

The HPS Team performed Class 1 survey activities in Survey Unit 15. A total of 18 post-remediation gamma static measurements were logged. The maximum gamma static measurements logged were 193 cpm for the FIDLER and 5,822 cpm. In addition, nine post-remediation soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

Parcel E/UC3 Storm Drain and Sanitary Sewer Removal Activities

Compaction testing was continued on recently backfilled areas of Trench Units No. 175 and 182. Based on the test results, backfill activities were completed in Trench Unit No. 175, but continued in Trench Unit No. 182.

The HPS Team continued pumping standing water from active trench units in UC3.

A variety of housekeeping activities were performed throughout Parcel E and UC3 by the HPS Team including street sweeping.

Issues/Items Pending Action

Internal Draft Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: February 16, 2011	RAD EMAC – CTO 002
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Overview

The HPS Team continued field activities in Buildings 203 and 271, and Work Area #33. Field activities were limited due to inclement weather. Details of the work activities performed are provided in the sections below.

Building 203

Sterling Environmental and the HPS Team continued asbestos abatement activities on furnace boilers and flooring. Approximately 40 cubic yards of firebrick was generated during the abatement activities and placed in LLRW bins DB1104D4, DB1439 and DB1443 for disposal.

Building 271

The HPS Team performed Class 1 survey activities in Survey Unit 6. A total of 228 gamma scan readings and 20 static measurements were logged with no gamma activity identified above the 3-sigma investigation level of 8,809 cpm. Twenty alpha/beta static measurements also were logged. The preliminary data does not indicate the presence of alpha/beta activity above the release limits. In addition, 20 swipe samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data

Parcel C Storm Drain and Sanitary Sewer Removal Activities

Excavation of trench segments 02-C33-28-8E, -8G, and -8H were terminated due to their proximity to Building 251. A total of six swipe samples were collected from the piping remaining in place by the HPS Team and submitted to the on-site laboratory for analysis.

A variety of housekeeping activities were performed throughout Parcel C by the HPS Team including street sweeping.

Issues/Items Pending Action

Internal Draft Removal Action Completion Report
Task-specific Plans approval



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel E and Utility Corridor 3 (UC3) Storm Drain and Sanitary Sewer Removal Action

Report Date: February 16, 2011

EMAC – CTO 03

Overview

The HPS Team continued field activities in the Building 707 Triangle Area, Parcel UC3, and Work Areas #16 and #21. Field activities were limited due to inclement weather. Details of the work activities performed are provided in the sections below.

Building 707 Triangle Area

The HPS Team remediated approximately 39 cubic yards of soil from Survey Units 5 and 8 and placed the material in LLRW bins BFLU000377G14, BKRU026115G7 and GFLU001104G14 for disposal by the DON's radiological waste contractor.

The HPS Team performed Class 1 survey activities in Survey Unit 17. A total of four characterization gamma static measurements were logged. The maximum measurements logged were 57 cpm (FIDLER) and 4,826 cpm. In addition, two soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data

Parcel E/UC3 Storm Drain and Sanitary Sewer Removal Activities

The HPS Team continued post-paving asphalt cleaning activities and continued preparation for road striping and traffic sign installation.

Additional storm water drainage was installed near Building 815 in UC3.

A variety of housekeeping activities were performed throughout Parcel E and UC3 by the HPS Team including street sweeping.

Issues/Items Pending Action

Internal Draft Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: March 8, 2011

RAD EMAC – CTO 002

Overview

The HPS Team continued field activities in Buildings 203, 214, and 241 and Work Areas #33 and #35. Details of the work activities performed are provided in the sections below.

Building 203

Sterling Environmental and the HPS Team performed additional asbestos abatement activities during the dismantlement of furnace boilers and the surrounding metal framework. A total of 3,360 feet of 3-inch-diameter boiler conduit debris was generated during the abatement activities and placed in LLRW bins BKRU026457, GFLU001164G13, GFLU001200G14, and GFLU001215G13 for disposal by the DON's radiological waste contractor.

Building 214

The HPS Team performed Class 1 survey activities in Survey Unit 1. A total of 496 alpha/beta scan readings were logged. The preliminary data does not indicate the presence of alpha/beta activity above the release limits. The RSO is in the process of reviewing these data.

Building 241

Pre-survey activities were performed by the HPS Team including the collection of alpha, beta, and gamma static measurements on assorted concrete and wood surfaces to be utilized as background references.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

The HPS Team excavated approximately 144 cubic yards of soil from Work Areas #33 and #35 and transferred the material to RSY4 pending survey activities. Excavation activities were performed for the following trench segments:

- 02-C33-00-1B 35 linear feet completed
- 02-C35-00-1A 57 linear feet completed
- 02-C35-00-1B 22 linear feet completed
- 02-C35-00-1C 4 linear feet completed
- 02-C35-00-1D 31 linear feet completed

- 02-C35-00-1E 44 linear feet completed.

A total of 193 linear feet of trench (including excavated soil, pipes and a manhole) identified on the design drawings was completed by the HPS Team.

Manhole MH1119 and pipes excavated from trench segments 02-C33-00-1B, 02-C35-00-1A, and 02-C35-00-1C were placed on plastic pending further activities.

The HPS Team investigated trench segments 02-C35-00-1B, -1D, and -1E for the presence of pipe. Although depicted in the design drawing, no pipe was found during these investigations.

The HPS Team provided the RASO with analytical results for the sediment sample collected from Manhole MH1104 (02-PCMH1104-019-01). No activity above the release criteria was identified.

The HPS Team provided the RASO with analytical results of the sediment sample collected from Manhole MH1105 (02-PCMH1105-018-01). This manhole will be disposed as LLRW due to ^{226}Ra activity (2.4670 pCi/g) above the release criteria.

In preparation for trench excavations, Work Area #33 asphalt was removed. In addition, rail lines were removed and cut to size by the HPS Team. The generated debris was staged pending transfer to the recycling stockpiles.

Work Area #33 perimeter fencing was reconfigured to facilitate upcoming excavation activities.

A variety of housekeeping activities were performed throughout Parcel C by the HPS Team including street sweeping.

Issues/Items Pending Action

Internal Draft Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel E and Utility Corridor 3 (UC3) Storm Drain and Sanitary Sewer Removal Action

Report Date: March 8, 2011	EMAC – CTO 03
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Overview

The HPS Team continued field activities in the Building 707 Triangle Area, Parcel UC3, and Work Areas #16 and #21. Details of the work activities performed are provided in the sections below.

Building 707 Triangle Area

The HPS Team performed survey activities in Survey Unit 9. A total of 40 systematic gamma static measurements were logged. The maximum measurements logged were 81 cpm (FIDLER) and 8,136 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

The HPS Team performed survey activities in Survey Unit 17. A total of 40 systematic gamma static measurements were logged. The maximum measurements logged were 202 cpm (FIDLER) and 7,675 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

The HPS Team provided the RASO with on-site analytical results for the post-remediation samples collected from Survey Unit 21. Because no activity above the release criteria was identified, systematic sample collection will be performed.

The HPS Team issued drawings to identify systematic sample collection locations in Survey Unit 21.

Parcel E/UC3 Storm Drain and Sanitary Sewer Removal Activities

A variety of housekeeping activities were performed throughout Parcels E and UC3 by the HPS Team including street sweeping.

Issues/Items Pending Action

Internal Draft Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel E and Building 500 Series Area Storm Drain and Sanitary Sewer Removal Action

Report Date: March 8, 2011	RMAC – CTO 07
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Overview

The HPS Team continued field activities for the Parcel E Building 500 Series area and Work Area #36. Details of the activities performed are provided in the sections below.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

The HPS Team resumed radiological surface scans, soil grading, and vegetation removal in the northeast corner of Work Area #36 in preparation for upcoming survey activities.

A variety of housekeeping activities were performed throughout the Building 500 Series area by the HPS Team.

Issues/Items Pending Action

Internal Draft Removal Action Completion Report
Task-specific Plans



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: May 5, 2011

RAD EMAC – CTO 002

Overview

The HPS Team continued field activities in Building 203 and Work Areas #33, #34, and #35. Details of the work activities performed are provided in the sections below.

Building 203

The HPS Team and Sterling resumed asbestos abatement activities in the former office workspaces and restrooms.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

The HPS Team excavated approximately 84 cubic yards of soil from Work Areas #33 and #34 and transferred the material to RSY4 for processing. Excavation activities were performed for the following trench segments:

- 02-C33-28-3U 12 linear feet completed
- 02-C34-28-1X 2 linear feet completed
- 02-C34-28-1Z 32 linear feet completed

A total of 46 linear feet of trench (including excavated soil, pipes, and manholes) identified on the design drawings was completed by the HPS Team.

Manholes MH1022, MH1042, MH1110, MH1134, and MH1137 and pipes excavated from trench segments 02-C33-28-3U, 02-C34-28-1X, and 02-C34-28-1Z were placed on plastic pending further activities.

A total of two sediment samples were collected from excavated Manholes MH1022 (MH0050) and MH1134 (MH0051) by the HPS Team and submitted to the on-site laboratory for analysis.

The HPS Team completed backfilling activities for Trench Unit No. 191.

The HPS Team initiated backfilling activities for Trench Unit No. 193.

The HPS Team provided the RASO with analytical results for the sediment sample collected from a pipe section excavated from trench segment 02-C34-28-2C (PI0005); No activity above the release criteria was identified.

The HPS Team issued Figures 1-1/3-1 for inclusion in the Internal Draft SUPR for Trench Survey Units No. 196, 202, and 203.

Catch basins and associated piping was installed in Work Area #35 as a component of Trench Unit No. 193.

A variety of housekeeping activities were performed throughout Parcel C by the HPS Team including street sweeping.

Issues/Items Pending Action

Internal Draft Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel E and Utility Corridor 3 (UC3) Storm Drain and Sanitary Sewer Removal Action

Report Date: May 5, 2011	EMAC – CTO 03
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Overview

The HPS Team continued field activities in the Building 707 Triangle Area, Parcel UC3, and Work Areas #16 and #21. Details of the work activities performed are provided in the sections below.

Building 707 Triangle Area

Approximately 31 cubic yards of soil was remediated from Survey Units 9 and 17 by the HPS Team and placed in LLRW bins GFLU001016G14, GFLU001221G8, GFLU001237G16, MHFU001109G15, and MHFU001653G12.

Following remediation, the HPS Team logged eight post-remediation gamma static measurements in Survey Unit 9. The maximum measurements logged were 83 cpm (FIDLER) and 6,694 cpm. In addition, four soil samples were collected and submitted to the off-site laboratory for analysis. The RSO is in the process of reviewing these data.

The HPS Team issued drawings to identify locations for investigative sample collection in Survey Unit 19.

Parcel E/UC3 Storm Drain and Sanitary Sewer Removal Activities

The HPS Team resumed site restoration activities for Parcel UC3 including paving along Crisp Road.

A variety of housekeeping activities were performed throughout Parcels E and UC3 by the HPS Team including street sweeping.

Issues/Items Pending Action

Internal Draft Removal Action Completion Report



TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Shipyard Basewide Radiological Support

Report Date: May 5, 2011

RMAC – CTO 004

Overview

The HPS Team continued radiological Basewide functions including support activities, radiological screening yard (RSY) processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

The HPS Team performed the following RSY2 processing activities:

Completed towed array of ES Unit 0498.

No field activities were conducted at RSY3.

The HPS Team performed the following RSY4 processing activities:

Received a total of 7 truckloads of material for processing.

Completed towed array of ES Units 0488 and 0491.

Collected biased and systematic samples at ES Units 0487 and 0490.

Collected systematic samples at ES Unit 0091.

With RASO concurrence, cleared ES Units 0474, 0392, and 0460 pending offsite analytical results.

The HPS Team continued radiological monitoring and control activities for RSY2, RSY3, and RSY4 including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring.

The HPS Team submitted the offsite data for RASO evaluation for concurrence to dispose of ES Units 0339, 0373, 0382, and 0403 as non-LLRW.

On-Site and Off-Site Laboratories

On-site laboratory staff continued to operate 12 gamma spectroscopy detectors and the Protean unit. The following activities were completed:

Soil samples received for gamma spectroscopy analysis: 112

Samples analyzed by gamma spectroscopy: 110

Gamma spectroscopy samples recounted: 5

Protean swipe samples counted: 103

Protean air samples counted: 15

A total of 67 samples are awaiting gamma spectroscopy analysis in the on-site laboratory.



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: May 5, 2011	RMAC – CTO 07
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Overview

The HPS Team continued field activities for Building 521 and the Building 500 Series Area. Details of the activities performed are provided in the sections below.

Building 521

The HPS Team and Sterling Environmental continued asbestos abatement activities on the metal boiler framing.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

A variety of housekeeping activities were performed throughout the Building 500 Series area by the HPS Team.

Issues/Items Pending Action

Internal Draft Removal Action Completion Report
Task-specific Plans



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: June 8, 2011	RAD EMAC – CTO 002
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Overview

The HPNS Team continued field activities in Building 272 and Work Areas #31 and #33. Details of the work activities performed are provided in the sections below.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

The HPNS Team excavated approximately 105 cubic yards of soil from Work Area #33 and transferred the material to both RSY3 and RSY4 for processing. Excavation activities were performed for the following trench segments:

- 02-272-00-8A 10 linear feet completed
- 02-272-00-8H 60 linear feet completed
- 02-272-00-8I 4 linear feet completed
- 02-272-00-8J 4 linear feet completed
- 02-272-00-8K 4 linear feet completed

A total of 82 linear feet of trench (including excavated soil and pipes) not identified on the design drawings was completed by the HPS Team.

Pipes excavated from trench segments 02-272-00-8A, -8H, -8I, -8J and -8K were placed on plastic pending further activities

The HPNS Team provided the RASO with analytical results for the systematic samples collected from Trench Unit No. 205. No activity above the release criteria was identified.

The HPNS Team issued drawings to identify locations for systematic sample collection in Trench Unit No. 209.

Pre-survey activities including asphalt removal and staging were performed by the HPNS Team in Work Area #33

A variety of housekeeping activities were performed throughout Parcel C by the HPNS Team including street sweeping.

Issues/Items Pending Action

Internal Draft Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel E and Utility Corridor 3 (UC3) Storm Drain and Sanitary Sewer Removal Action

Report Date: June 8, 2011	EMAC – CTO 03
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Overview

The HPNS Team continued field activities in the Building 707 Triangle Area and Work Areas #16 and #21. Details of the work activities performed are provided in the sections below.

Building 707 Triangle Area

The HPNS Team performed survey activities in Survey Unit 9. A total of 40 systematic gamma static measurements were logged. The maximum measurements logged were 88 cpm (FIDLER) and 6,758 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data

The HPNS Team performed survey activities in Survey Unit 17. A total of 40 systematic gamma static measurements were logged. The maximum measurements logged were 180 cpm (FIDLER) and 6,993 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

Parcel E/UC3 Storm Drain and Sanitary Sewer Removal Activities

A variety of housekeeping activities were performed throughout Parcels E and UC3 by the HPNS Team including street sweeping.

Issues/Items Pending Action

Internal Draft Removal Action Completion Report



TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Base-wide Radiological Support

Report Date: June 08, 2011

RMAC – CTO 004

Overview

The HPNS Team continued radiological base-wide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

A total of six truckloads of material was received at RSY3 for processing.

A total of three truckloads of material was received at RSY4 for processing.

The HPNS Team continued radiological monitoring and control activities for RSY2, RSY3, and RSY4 including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring.

On-Site and Off-Site Laboratories

On-site laboratory staff continued to operate 12 gamma spectroscopy detectors and the Protean unit. The following activities were completed:

Soil samples received for gamma spectroscopy analysis: 212

Swipe samples received for Protean counts: 132

Air samples received: 14

Samples analyzed by gamma spectroscopy: 94

Gamma spectroscopy samples recounted: 14

Protean swipe samples counted: 60

Protean air samples counted: 13

A total of 415 samples are awaiting gamma spectroscopy analysis in the on-site laboratory.



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: June 8, 2011

RMAC – CTO 07

Overview

The HPNS Team continued field activities for the Buildings 503 Site, Building 521, and the Building 500 Series Area. Details of the activities performed are provided in the sections below.

Building 503 Site

The HPNS Team performed gamma scan surveys utilizing the towed array over Survey Unit 6.

The HPNS Team performed Class 1 survey activities for the Building 503 site as follows:

Survey Unit 2 A total of 20 gamma static measurements were logged. The maximum measurement logged was at 5,340 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis.

Survey Unit 3 A total of 20 gamma static measurements were logged. The maximum measurement logged was at 6,188 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis.

Survey Unit 4 A total of 20 gamma static measurements were logged. The maximum measurement logged was at 5,174 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis.

Survey Unit 5 A total of 20 gamma static measurements were logged. The maximum measurement logged was at 5,859 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis.

Survey Unit 6 A total of 20 gamma static measurements were logged. The maximum measurement logged was at 6,376 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis.

The RSO is in the process of reviewing the survey results for Survey Units 2 through 6.

Building 521

Residual fuel oil from pipes inside building floor channels was drained into drums by the HPNS Team. The drained oil pipes were removed and staged pending survey activities.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

A total of six truckloads of vegetation generated during Work Area #36 soil grading and other activities were manually scanned followed by screening through the HPNS portal monitor with no alarms.

Surveyed and released concrete debris (Survey #HPS-A-500SA-005) was transferred to the recycling stockpiles.

A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

Internal Draft Removal Action Completion Report
Task-specific Plans

Area	Survey Unit	Sample Point	Sample Type	Sample ID	Date Collected	COC Radiological Technician
707	9	1	Systematic	03707-S0009-F001-01	22-Nov-10	Jeff Rolfe
707	9	2	Systematic	03707-S0009-F002-01	22-Nov-10	Jeff Rolfe
707	9	3	Systematic	03707-S0009-F003-01	22-Nov-10	Jeff Rolfe
707	9	4	Systematic	03707-S0009-F004-01	22-Nov-10	Jeff Rolfe
707	9	5	Systematic	03707-S0009-F005-01	22-Nov-10	Jeff Rolfe
707	9	6	Systematic	03707-S0009-F006-01	22-Nov-10	Jeff Rolfe
707	9	7	Systematic	03707-S0009-F007-01	22-Nov-10	Jeff Rolfe
707	9	8	Systematic	03707-S0009-F008-01	22-Nov-10	Jeff Rolfe
707	9	9	Systematic	03707-S0009-F009-01	22-Nov-10	Jeff Rolfe
707	9	10	Systematic	03707-S0009-F010-01	22-Nov-10	Jeff Rolfe
707	9	11	Systematic	03707-S0009-F011-01	22-Nov-10	Jeff Rolfe
707	9	12	Systematic	03707-S0009-F012-01	22-Nov-10	Jeff Rolfe
707	9	13	Systematic	03707-S0009-F013-01	22-Nov-10	Jeff Rolfe
707	9	14	Systematic	03707-S0009-F014-01	22-Nov-10	Jeff Rolfe
707	9	15	Systematic	03707-S0009-F015-01	22-Nov-10	Jeff Rolfe
707	9	16	Systematic	03707-S0009-F016-01	22-Nov-10	Jeff Rolfe
707	9	17	Systematic	03707-S0009-F017-01	22-Nov-10	Jeff Rolfe
707	9	18	Systematic	03707-S0009-F018-01	22-Nov-10	Jeff Rolfe
707	9	19	Systematic	03707-S0009-F019-01	22-Nov-10	Jeff Rolfe
707	9	20	Systematic	03707-S0009-F020-01	22-Nov-10	Jeff Rolfe
707	9	21	Biased	03707-S0009-F021-01	30-Nov-10	Jeff Rolfe
707	9	22	Biased	03707-S0009-F022-01	30-Nov-10	Jeff Rolfe
707	9	23	Biased	03707-S0009-F023-01	30-Nov-10	Jeff Rolfe
707	9	24	Biased	03707-S0009-F024-01	30-Nov-10	Jeff Rolfe
707	9	25	Biased	03707-S0009-F025-01	30-Nov-10	Jeff Rolfe
707	9	26	Biased	03707-S0009-F026-01	30-Nov-10	Jeff Rolfe
707	9	27	Biased	03707-S0009-F027-01	30-Nov-10	Jeff Rolfe
707	9	28	Characterization	03707-S0009-F028-01	07-Jan-11	Rick Zahensky
707	9	29	Characterization	03707-S0009-F029-01	07-Jan-11	Rick Zahensky
707	9	30	Characterization	03707-S0009-F030-01	07-Jan-11	Rick Zahensky
707	9	31	Post-Remediation	03707-S0009-F031-01	20-Jan-11	Anthony Smith
707	9	32	Post-Remediation	03707-S0009-F032-01	20-Jan-11	Anthony Smith
707	9	33	Post-Remediation	03707-S0009-F033-01	16-Feb-11	Rick Zahensky
707	9	34	Post-Remediation	03707-S0009-F034-01	16-Feb-11	Rick Zahensky
707	9	35	Systematic	03707-S0009-F035-01	08-Mar-11	Rick Zahensky
707	9	36	Systematic	03707-S0009-F036-01	08-Mar-11	Rick Zahensky
707	9	37	Systematic	03707-S0009-F037-01	08-Mar-11	Rick Zahensky
707	9	38	Systematic	03707-S0009-F038-01	08-Mar-11	Rick Zahensky
707	9	39	Systematic	03707-S0009-F039-01	08-Mar-11	Rick Zahensky
707	9	40	Systematic	03707-S0009-F040-01	08-Mar-11	Rick Zahensky
707	9	41	Systematic	03707-S0009-F041-01	08-Mar-11	Rick Zahensky
707	9	42	Systematic	03707-S0009-F042-01	08-Mar-11	Rick Zahensky
707	9	43	Systematic	03707-S0009-F043-01	08-Mar-11	Rick Zahensky
707	9	44	Systematic	03707-S0009-F044-01	08-Mar-11	Rick Zahensky
707	9	45	Systematic	03707-S0009-F045-01	08-Mar-11	Rick Zahensky
707	9	46	Systematic	03707-S0009-F046-01	08-Mar-11	Rick Zahensky
707	9	47	Systematic	03707-S0009-F047-01	08-Mar-11	Rick Zahensky
707	9	48	Systematic	03707-S0009-F048-01	08-Mar-11	Rick Zahensky
707	9	49	Systematic	03707-S0009-F049-01	08-Mar-11	Rick Zahensky
707	9	50	Systematic	03707-S0009-F050-01	08-Mar-11	Rick Zahensky
707	9	51	Systematic	03707-S0009-F051-01	08-Mar-11	Rick Zahensky
707	9	52	Systematic	03707-S0009-F052-01	08-Mar-11	Rick Zahensky
707	9	53	Systematic	03707-S0009-F053-01	08-Mar-11	Rick Zahensky

K-40	Ra-226	Cs-137	Bi-214	Pb-214
15.825	0.79058	0.090392	0.66971	0.48601
10.906	0.60437	0.072327	0.39988	0.38924
14.752	0.19637	0.21316	0.48314	0.53697
20.035	0.83018	-0.0059882	0.99726	0.63873
8.7188	-0.074708	0.0060262	0.4103	0.4576
19.222	0.8318	0.024056	0.65834	0.54361
15.248	0.75108	0.022489	0.63814	0.49596
10.18	0.40552	0.091476	0.44765	0.36308
10.884	0.38056	0.015119	0.52188	0.35568
14.501	1.08	0.038536	0.72925	0.59949
12.471	0.30632	0.17542	0.41799	0.34118
11.666	0.70081	-0.0055894	0.42054	0.38589
15.48	0.72217	-0.013376	0.6705	0.71667
16.543	-0.21	0.021763	0.7285	0.81491
10.246	0.45378	0.088195	0.30406	0.32252
12.361	-0.32205	0.02658	0.46394	0.44226
21.735	0.9406	0.045461	0.79742	0.86345
27.149	0.11558	0.024619	0.83868	0.80633
16.787	0.46849	0.024241	0.72761	0.87069
15.538	0.9379	-0.0057145	0.63528	0.69002
18.669	1.0514	0.0042414	0.99396	0.9429
20.789	0.41153	0.0073687	0.79471	0.69483
22.467	1.4286	0.01483	0.755	0.70264
19.648	0.32767	0.034626	0.59908	0.59955
17.57	0.3929	0.016687	0.59948	0.56172
20.393	0.97089	0.061099	0.67943	0.68352
13.861	0.98948	0.021291	0.46325	0.50986
13.64	0.5886	0.087	0.544	0.5539
12.2	0.6208	0.02073	0.3816	0.4148
23.9	1.171	-0.004451	0.8318	0.8927
20.02	0.596	0.0005613	0.7344	0.8253
10.72	0.6733	-0.0004529	0.5496	0.6207
25.57	0.5911	-0.01018	0.7626	0.7789
24.24	0.9391	0.0002108	0.6381	0.6045
10.5	0.6161	0.009099	0.3395	0.4877
10.03	0.8014	0	0.3697	0.4256
9.848	0.3778	0.02176	0.2651	0.3141
11.94	0.3058	0.009321	0.2717	0.3578
11.21	0.6075	0.0149	0.3989	0.3861
10.05	0.8666	0.0124	0.4057	0.3671
10.77	0.8525	0	0.3994	0.4902
11.46	0.1428	-0.001279	0.4663	0.393
9.663	0.7324	-0.001499	0.4177	0.4028
9.468	0.6251	-0.002792	0.2912	0.2965
11.09	0.4159	-0.0004437	0.3503	0.3351
8.909	0.2633	0.01277	0.1766	0.2859
11.27	0.6715	-0.000487	0.3509	0.3854
10.83	1.012	0.001519	0.4029	0.4358
10.2	0.5191	0.01228	0.3132	0.4318
11.22	0.31	-0.006724	0.3508	0.4601
10.55	0.5601	0	0.3454	0.4317
9.506	0.607	0.002631	0.3769	0.5008
11.51	0.5865	0.004301	0.4425	0.3883

[illegible]

Area	Survey Unit	Sample Point	Sample Type	Sample ID	Date Collected	COC Radiological Technician
707	9	54	Systematic	03707-S0009-F054-01	08-Mar-11	Rick Zahensky
707	9	55	Sr90 Remediation	03707-S0009-F055-01	05-May-11	Rick Zahensky
707	9	56	Sr90 Remediation	03707-S0009-F056-01	05-May-11	Rick Zahensky
707	9	57	Sr90 Remediation	03707-S0009-F057-01	05-May-11	Rick Zahensky
707	9	58	Sr90 Remediation	03707-S0009-F058-01	05-May-11	Rick Zahensky
707	9	59	Systematic	03707-S0009-F059-01	08-Jun-11	Jeff Rolfe
707	9	60	Systematic	03707-S0009-F060-01	08-Jun-11	Jeff Rolfe
707	9	61	Systematic	03707-S0009-F061-01	08-Jun-11	Jeff Rolfe
707	9	62	Systematic	03707-S0009-F062-01	08-Jun-11	Jeff Rolfe
707	9	63	Systematic	03707-S0009-F063-01	08-Jun-11	Jeff Rolfe
707	9	64	Systematic	03707-S0009-F064-01	08-Jun-11	Jeff Rolfe
707	9	65	Systematic	03707-S0009-F065-01	08-Jun-11	Jeff Rolfe
707	9	66	Systematic	03707-S0009-F066-01	08-Jun-11	Jeff Rolfe
707	9	67	Systematic	03707-S0009-F067-01	08-Jun-11	Jeff Rolfe
707	9	68	Systematic	03707-S0009-F068-01	08-Jun-11	Jeff Rolfe
707	9	69	Systematic	03707-S0009-F069-01	08-Jun-11	Jeff Rolfe
707	9	70	Systematic	03707-S0009-F070-01	08-Jun-11	Jeff Rolfe
707	9	71	Systematic	03707-S0009-F071-01	08-Jun-11	Jeff Rolfe
707	9	72	Systematic	03707-S0009-F072-01	08-Jun-11	Jeff Rolfe
707	9	73	Systematic	03707-S0009-F073-01	08-Jun-11	Jeff Rolfe
707	9	74	Systematic	03707-S0009-F074-01	08-Jun-11	Jeff Rolfe
707	9	75	Systematic	03707-S0009-F075-01	08-Jun-11	Jeff Rolfe
707	9	76	Systematic	03707-S0009-F076-01	08-Jun-11	Jeff Rolfe
707	9	77	Systematic	03707-S0009-F077-01	08-Jun-11	Jeff Rolfe
707	9	78	Systematic	03707-S0009-F078-01	08-Jun-11	Jeff Rolfe

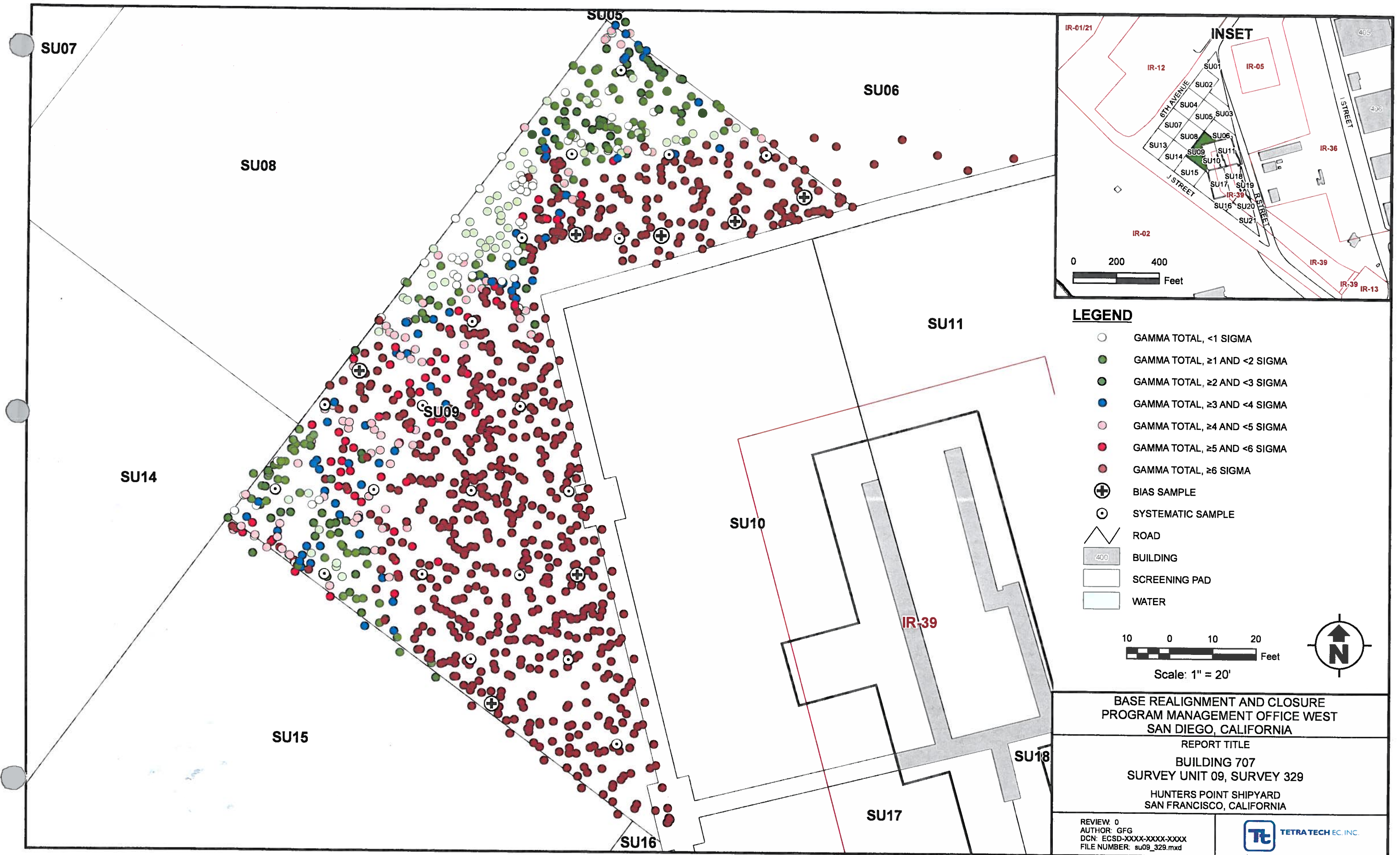
On-Site Laboratory (pCi/g)

K-40	Ra-226	Cs-137	Bi-214	Pb-214
9.446	0.1302	0	0.4124	0.4137
0.2748	0.21	0.00849	-0.008036	-0.03504
0.1427	0.3812	0.0003483	0.02075	0.003156
0.4596	0.2062	0	-0.009608	0.003167
0.4908	0.1793	0.004782	0.04719	-0.00925
1.376	0	0	0.04795	0.001895
0.9757	0.145	0.0002872	-0.01059	0.04842
0.4746	0.09491	0.0004212	0.03414	-0.009579
0.8478	-0.008074	0.00087	0.003286	0.009988
1.202	0.01622	-0.001686	-0.002968	0.02754
1.027	0.1761	0	0.04829	0.03009
1.462	-0.04433	-0.00009218	0.03846	0.01206
0.6561	0.03258	0.00008814	0.04474	0.03558
0.8179	0.07481	0.002885	-0.009769	0.01084
0.5939	-0.1118	0	-0.01725	0.02058
1.329	0.2135	0	-0.01831	0.02499
1.048	-0.05275	0.00467	-0.019	0.08097
0.7567	-0.1179	0.01064	-0.005697	0.00141
0.6125	0.0171	-0.0006382	0.01198	0.002024
0.5315	0.1663	0.007838	-0.01427	0.009163
1.041	0.06527	0.02016	0.02616	-0.001491

Off-Site Laboratory (pCi/g)

K-40	Ra-226	Cs-137	Bi-214	Pb-214
10.5	0.555	0.00193	0.555	0.546
0.381	0.0564	0.00671	0.0564	0.174
0.441	0.0213	0.0164	0.0213	-0.0161
0.706	-0.00548	0.00996	-0.00548	0.0138
1	0.0783	0.00793	0.0783	0.174
1.27	0.0611	0	0.0611	0.104
0.305	-0.00512	0.0000896	-0.00512	0.2
1.22	-0.0104	0	-0.0104	0.0655
0.679	0.0334	0.00248	0.0334	0.0455
0.483	0.015	0	0.015	0.0279
0.59	-0.0495	0.0252	-0.0495	0.0582
1.46	0.0234	0.00757	0.0234	0.208
0.958	-0.0114	-0.00717	-0.0114	0.0453
1.44	0.0643	-0.000218	0.0643	0.0943
0.902	0.0458	-0.00829	0.0458	0.0261
1.31	-0.00403	0.0000891	-0.00403	0.0595
0.322	0.0153	-0.000994	0.0153	0.111
0.81	0.144	0.00111	0.144	0.0607
1.23	0.0703	0.0218	0.0703	0.106
0.829	0.0475	0.00846	0.0475	-0.0229
0.508	0.0342	0.000035	0.0342	-0.016

Highlighted Activities: Ra-226 ≥ 1.633 (On-site) & 1.375 (Off-site) ; Cs-137 ≥ 0.113 ; Bi-214 ≥ 1.485 ; Pb-214 ≥ 1.485 (pCi/g)



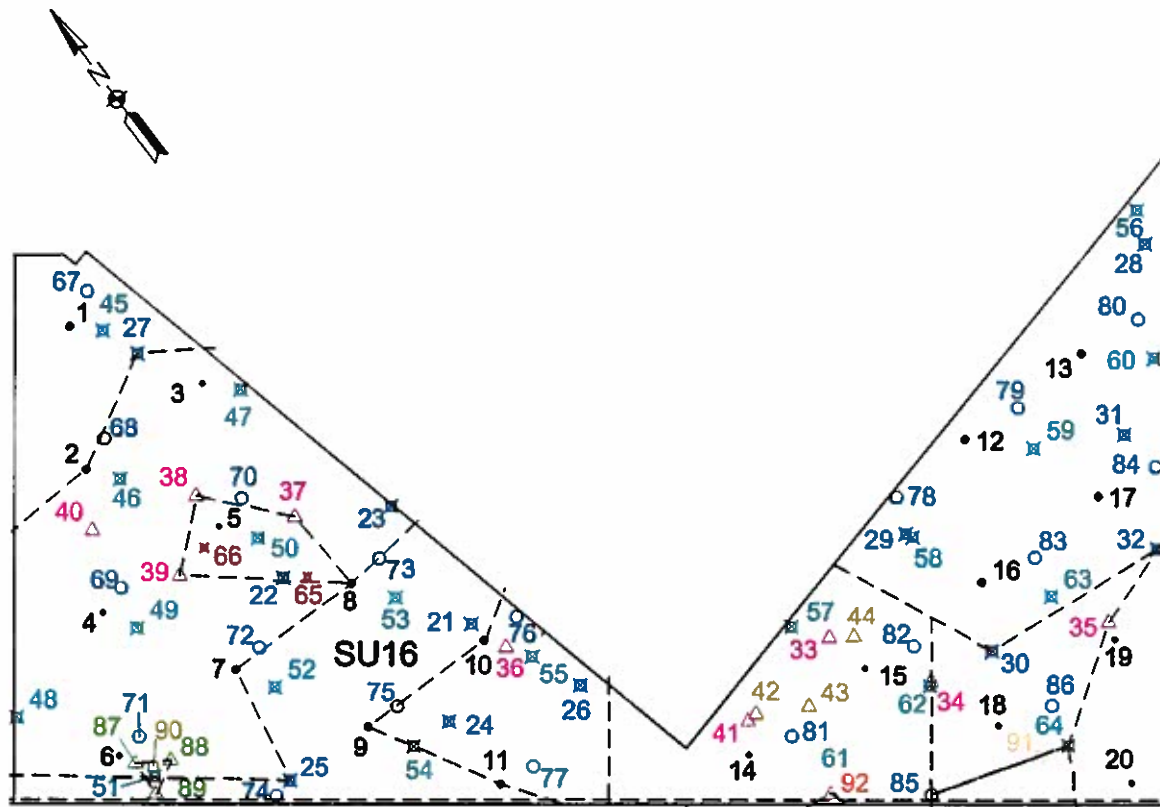
BASE REALIGNMENT AND CLOSURE
PROGRAM MANAGEMENT OFFICE WEST
SAN DIEGO, CALIFORNIA

REPORT TITLE
BUILDING 707
SURVEY UNIT 09, SURVEY 329
HUNTERS POINT SHIPYARD
SAN FRANCISCO, CALIFORNIA

REVIEW: 0
AUTHOR: GFG
DCN: ECSD-XXXX-XXXX-XXXX
FILE NUMBER: su09_329.mxd



P:\CTO-03 CAD FILES\DWG FILES\707 SURVEY UNITS\707_SURVEY _10-15-12.DWG
PLOT/UPDATE: OCT 18 2012 13:21:05



LEGEND:

- 1 SYSTEMATIC 1 SAMPLES 1-20
- 21 BIASED SAMPLES 21-32
- △ 33 POST REMEDIATION 1 SAMPLES 33-41
- △ 42 POST REMEDIATION 2 SAMPLES 42-44
- 45 SYSTEMATIC 2 SAMPLES 45-64
- 65 Sr-90 REMEDIATION 1 SAMPLES 65-66
- 67 SYSTEMATIC 3 SAMPLES 67-86
- △ 87 Sr-90 REMEDIATION 2 SAMPLES 87-90
- △ 91 POST REMEDIATION 3 SAMPLES 91
- △ 92 CHARACTERIZATION SAMPLES 92
- PREVIOUS REMEDIATION

RECORD COPY

SCALE 1:30

HUNTERS POINT SHIPYARD
SAN FRANCISCO, CA
P.O. BOX 884836
SAN FRANCISCO, CA 94188

BUILDING 707
SURVEY UNIT 16



TETRA TECH EC, INC
1230 COLUMBIA STREET, SUITE 750
SAN DIEGO, CA 92101
TEL: (619) 234-8690 FAX: (619) 234-8591



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1	11/22/2010 10:03	7085	5817	1268	479-BKGDS1A	7378	
2	11/22/2010 10:05	6079	5817	262	479-BKGDS1A	7378	
3	11/22/2010 10:06	6763	5817	946	479-BKGDS1A	7378	
4	11/22/2010 10:07	7188	5817	1371	479-BKGDS1A	7378	
5	11/22/2010 10:28	6581	5817	764	479-BKGDS1A	7378	
6	11/22/2010 10:29	4524	5817	-1293	479-BKGDS1A	7378	
7	11/22/2010 10:30	8160	5817	2343	479-BKGDS1A	7378	
8	11/22/2010 10:32	8503	5817	2686	479-BKGDS1A	7378	
9	11/22/2010 10:33	5837	5817	20	479-BKGDS1A	7378	
10	11/22/2010 10:35	7626	5817	1809	479-BKGDS1A	7378	
11	11/22/2010 10:36	4153	5817	-1664	479-BKGDS1A	7378	
12	11/22/2010 10:38	6626	5817	809	479-BKGDS1A	7378	
13	11/22/2010 10:39	7675	5817	1858	479-BKGDS1A	7378	
14	11/22/2010 10:41	4585	5817	-1232	479-BKGDS1A	7378	
15	11/22/2010 10:42	5829	5817	12	479-BKGDS1A	7378	
16	11/22/2010 10:43	6930	5817	1113	479-BKGDS1A	7378	
17	11/22/2010 10:45	7312	5817	1495	479-BKGDS1A	7378	
18	11/22/2010 10:46	5313	5817	-504	479-BKGDS1A	7378	
19	11/22/2010 10:48	6993	5817	1176	479-BKGDS1A	7378	
20	11/22/2010 10:49	5067	5817	-750	479-BKGDS1A	7378	
21	12/1/2010 11:35	9091	5817	3274	479-BKGDS1A	7378	
22	12/1/2010 11:37	8079	5817	2262	479-BKGDS1A	7378	
23	12/1/2010 11:38	8910	5817	3093	479-BKGDS1A	7378	
24	12/1/2010 11:41	5606	5817	-211	479-BKGDS1A	7378	
25	12/1/2010 11:42	7175	5817	1358	479-BKGDS1A	7378	
26	12/1/2010 11:44	7850	5817	2033	479-BKGDS1A	7378	
27	12/1/2010 11:45	7722	5817	1905	479-BKGDS1A	7378	
28	12/1/2010 11:47	8948	5817	3131	479-BKGDS1A	7378	
29	12/1/2010 11:48	7335	5817	1518	479-BKGDS1A	7378	
30	12/1/2010 11:49	8065	5817	2248	479-BKGDS1A	7378	
31	12/1/2010 11:51	8691	5817	2874	479-BKGDS1A	7378	
32	12/1/2010 11:52	8072	5817	2255	479-BKGDS1A	7378	



TETRA TECH EC, INC.
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Gamma Direct Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
33	1/17/2011 12:55	7653	5817	1836	479-BKGDS1A	7378	
34	1/17/2011 12:56	5475	5817	-342	479-BKGDS1A	7378	
35	1/17/2011 12:57	6207	5817	390	479-BKGDS1A	7378	
36	1/17/2011 12:58	7097	5817	1280	479-BKGDS1A	7378	
37	1/17/2011 13:31	7831	5817	2014	479-BKGDS1A	7378	
38	1/17/2011 13:34	7692	5817	1875	479-BKGDS1A	7378	
39	1/17/2011 13:35	5518	5817	-299	479-BKGDS1A	7378	
40	1/17/2011 13:37	5582	5817	-235	479-BKGDS1A	7378	
41	1/17/2011 13:38	5458	5817	-359	479-BKGDS1A	7378	
42	2/15/2011 13:30	4468	5817	-1349	479-BKGDS1A	7378	
43	2/15/2011 13:31	4068	5817	-1749	479-BKGDS1A	7378	
44	2/15/2011 13:33	4389	5817	-1428	479-BKGDS1A	7378	
45	3/4/2011 13:24	6582	5817	765	479-BKGDS1A	7378	
46	3/4/2011 13:25	4625	5817	-1192	479-BKGDS1A	7378	
47	3/4/2011 13:27	4602	5817	-1215	479-BKGDS1A	7378	
48	3/4/2011 13:28	4255	5817	-1562	479-BKGDS1A	7378	
49	3/4/2011 13:29	5058	5817	-759	479-BKGDS1A	7378	
50	3/4/2011 13:31	5728	5817	-89	479-BKGDS1A	7378	
51	3/4/2011 13:32	4575	5817	-1242	479-BKGDS1A	7378	
52	3/4/2011 13:33	6462	5817	645	479-BKGDS1A	7378	
53	3/4/2011 13:34	6598	5817	781	479-BKGDS1A	7378	
54	3/4/2011 13:36	4836	5817	-981	479-BKGDS1A	7378	
55	3/4/2011 13:37	6885	5817	1068	479-BKGDS1A	7378	
56	3/4/2011 13:38	4266	5817	-1551	479-BKGDS1A	7378	
57	3/4/2011 13:40	4291	5817	-1526	479-BKGDS1A	7378	
58	3/4/2011 13:41	6628	5817	811	479-BKGDS1A	7378	
59	3/4/2011 13:42	6493	5817	676	479-BKGDS1A	7378	
60	3/4/2011 13:44	6347	5817	530	479-BKGDS1A	7378	
61	3/4/2011 13:45	5895	5817	78	479-BKGDS1A	7378	
62	3/4/2011 13:46	4538	5817	-1279	479-BKGDS1A	7378	
63	3/4/2011 13:47	6903	5817	1086	479-BKGDS1A	7378	
64	3/4/2011 13:49	6963	5817	1146	479-BKGDS1A	7378	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
65	5/6/2011 11:39	5500	5817	-317	479-BKGDS1A	7378	
66	5/6/2011 11:40	4943	5817	-874	479-BKGDS1A	7378	
67	6/7/2011 12:50	5849	5873	-24	518-BKGDS1B	7049	
68	6/7/2011 12:51	5203	5873	-670	518-BKGDS1B	7049	
69	6/7/2011 12:52	5503	5873	-370	518-BKGDS1B	7049	
70	6/7/2011 12:54	5251	5873	-622	518-BKGDS1B	7049	
71	6/7/2011 12:55	4026	5873	-1847	518-BKGDS1B	7049	
72	6/7/2011 12:57	6356	5873	483	518-BKGDS1B	7049	
73	6/7/2011 12:59	7078	5873	1205	518-BKGDS1B	7049	
74	6/7/2011 13:00	6925	5873	1052	518-BKGDS1B	7049	
75	6/7/2011 13:02	5165	5873	-708	518-BKGDS1B	7049	
76	6/7/2011 13:03	6309	5873	436	518-BKGDS1B	7049	
77	6/7/2011 13:05	4257	5873	-1616	518-BKGDS1B	7049	
78	6/7/2011 13:07	6537	5873	664	518-BKGDS1B	7049	
79	6/7/2011 13:09	7256	5873	1383	518-BKGDS1B	7049	
80	6/7/2011 13:12	7065	5873	1192	518-BKGDS1B	7049	
81	6/7/2011 13:14	4017	5873	-1856	518-BKGDS1B	7049	
82	6/7/2011 13:15	4383	5873	-1490	518-BKGDS1B	7049	
83	6/7/2011 13:17	7074	5873	1201	518-BKGDS1B	7049	
84	6/7/2011 13:18	7012	5873	1139	518-BKGDS1B	7049	
85	6/7/2011 13:20	5153	5873	-720	518-BKGDS1B	7049	
86	6/7/2011 13:21	4363	5873	-1510	518-BKGDS1B	7049	
87	5/4/2012 12:48	4185	5845	-1660	622-BKGDS1A	7004	
88	5/4/2012 12:50	3883	5845	-1962	622-BKGDS1A	7004	
89	5/4/2012 12:51	4768	5845	-1077	622-BKGDS1A	7004	
90	5/4/2012 15:08	5960	5845	115	622-BKGDS1A	7004	
91	6/29/2012 13:36	3858	5845	-1987	622-BKGDS1A	7004	
92	8/7/2012 11:13	6812	5845	967	622-BKGDS1A	7004	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 707 **Survey Unit:** 16 **Class:** 1 **Area:** 989.60 m² **Count Time:** 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
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Net Gamma cpm **Min: -1987**

Summary **Avg: 289**

Max: 3274

St Dev: 1387

Readings > 3σ investigation level are highlighted in blue

* Background ID correlates to instrument reference area background identification number

Gamma measurements > 3σ investigation level are verified by 2360 beta measurements



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

2350 Identification #: 479

Instrument/Probe Type: 2350-1 / 44-10

Instrument Serial #: 129430

Probe Serial #: 012176

Calibration Due Date: 5/12/2011

Reference Area Background Identification #: 479-8KGDS1A Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	07/29/2010 10:01	5432
2	07/29/2010 10:05	6064
3	07/29/2010 10:06	5667
4	07/29/2010 10:07	5647
5	07/29/2010 10:08	6956
6	07/29/2010 10:09	6120
7	07/29/2010 10:11	5199
8	07/29/2010 10:12	5083
9	07/29/2010 10:14	5880
10	07/29/2010 10:15	5567
11	07/29/2010 10:17	6268
12	07/29/2010 10:18	5786
13	07/29/2010 10:19	5405
14	07/29/2010 10:21	5984
15	07/29/2010 10:22	7018
16	07/29/2010 10:23	5521
17	07/29/2010 10:24	5872
18	07/29/2010 10:26	5464
19	07/29/2010 10:27	6157
20	07/29/2010 10:28	5241

Gamma Mean Background (cpm): 5817

Standard Deviation: 520

Gamma 3 σ Investigation
Level (cpm): 7378



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

2350 Identification #: 518

Instrument/Probe Type: 2350-1 / 44-10

Instrument Serial #: 126182

Probe Serial #: 230161

Calibration Due Date: 11/17/2011

Reference Area Background Identification #: 518-8KGDS1B Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	03/01/2011 10:24	5734
2	03/01/2011 10:26	6197
3	03/01/2011 10:27	5923
4	03/01/2011 10:28	5458
5	03/01/2011 10:29	6885
6	03/01/2011 10:30	5930
7	03/01/2011 10:31	5459
8	03/01/2011 10:32	5899
9	03/01/2011 10:34	5865
10	03/01/2011 10:35	5347
11	03/01/2011 10:36	5470
12	03/01/2011 10:37	5852
13	03/01/2011 10:38	6022
14	03/01/2011 10:40	6222
15	03/01/2011 10:41	5742
16	03/01/2011 10:42	5119
17	03/01/2011 10:43	5970
18	03/01/2011 10:44	5959
19	03/01/2011 10:45	6120
20	03/01/2011 10:46	6291

Gamma Mean Background (cpm): 5873

Standard Deviation: 392

Gamma 3σ Investigation
Level (cpm): 7049



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

2350 Identification #: 622

Instrument/Probe Type: 2350-1 / 44-10

Instrument Serial #: 129430

Probe Serial #: 230163

Calibration Due Date: 10/2/2012

Reference Area Background Identification #: 622-BKGDS1A Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	10/13/2011 15:12	5811
2	10/13/2011 15:13	5788
3	10/13/2011 15:14	5839
4	10/13/2011 15:15	5848
5	10/13/2011 15:16	5775
6	10/13/2011 15:17	5780
7	10/13/2011 15:18	5977
8	10/13/2011 15:20	5831
9	10/13/2011 15:21	5998
10	10/13/2011 15:22	5240
11	10/13/2011 15:23	5892
12	10/13/2011 15:24	5899
13	10/13/2011 15:25	5001
14	10/13/2011 15:27	5852
15	10/13/2011 15:28	5894
16	10/13/2011 15:29	5075
17	10/13/2011 15:31	6115
18	10/13/2011 15:32	6400
19	10/13/2011 15:33	6490
20	10/13/2011 15:35	6396

Gamma Mean Background (cpm): 5845

Standard Deviation: 386

Gamma 3 σ Investigation
Level (cpm): 7004



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1	11/22/2010 8:08	66	72	-6	513-BKGDS1A	133	
2	11/22/2010 8:09	65	72	-7	513-BKGDS1A	133	
3	11/22/2010 8:10	73	72	1	513-BKGDS1A	133	
4	11/22/2010 8:12	78	72	6	513-BKGDS1A	133	
5	11/22/2010 8:13	100	72	28	513-BKGDS1A	133	
6	11/22/2010 8:15	68	72	-4	513-BKGDS1A	133	
7	11/22/2010 8:16	83	72	11	513-BKGDS1A	133	
8	11/22/2010 8:18	109	72	37	513-BKGDS1A	133	
9	11/22/2010 8:19	77	72	5	513-BKGDS1A	133	
10	11/22/2010 8:21	73	72	1	513-BKGDS1A	133	
11	11/22/2010 8:22	44	72	-28	513-BKGDS1A	133	
12	11/22/2010 8:25	72	72	0	513-BKGDS1A	133	
13	11/22/2010 8:27	78	72	6	513-BKGDS1A	133	
14	11/22/2010 8:28	49	72	-23	513-BKGDS1A	133	
15	11/22/2010 8:29	71	72	-1	513-BKGDS1A	133	
16	11/22/2010 8:31	89	72	17	513-BKGDS1A	133	
17	11/22/2010 8:32	85	72	13	513-BKGDS1A	133	
18	11/22/2010 8:33	75	72	3	513-BKGDS1A	133	
19	11/22/2010 8:34	83	72	11	513-BKGDS1A	133	
20	11/22/2010 8:36	54	72	-18	513-BKGDS1A	133	
21	12/1/2010 8:18	72	72	0	513-BKGDS1A	133	
22	12/1/2010 8:19	75	72	3	513-BKGDS1A	133	
23	12/1/2010 8:21	82	72	10	513-BKGDS1A	133	
24	12/1/2010 8:22	60	72	-12	513-BKGDS1A	133	
25	12/1/2010 8:24	75	72	3	513-BKGDS1A	133	
26	12/1/2010 8:25	75	72	3	513-BKGDS1A	133	
27	12/1/2010 8:26	83	72	11	513-BKGDS1A	133	
28	12/1/2010 8:29	87	72	15	513-BKGDS1A	133	
29	12/1/2010 8:30	86	72	14	513-BKGDS1A	133	
30	12/1/2010 8:32	75	72	3	513-BKGDS1A	133	
31	12/1/2010 8:35	81	72	9	513-BKGDS1A	133	
32	12/1/2010 8:36	85	72	13	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
33	1/17/2011 13:43	73	72	1	513-BKGDS1A	133	
34	1/17/2011 13:45	58	72	-14	513-BKGDS1A	133	
35	1/17/2011 13:46	55	72	-17	513-BKGDS1A	133	
36	1/17/2011 13:47	70	72	-2	513-BKGDS1A	133	
37	1/17/2011 13:48	65	72	-7	513-BKGDS1A	133	
38	1/17/2011 13:50	70	72	-2	513-BKGDS1A	133	
39	1/17/2011 13:51	67	72	-5	513-BKGDS1A	133	
40	1/17/2011 13:52	60	72	-12	513-BKGDS1A	133	
41	1/17/2011 13:53	70	72	-2	513-BKGDS1A	133	
42	2/15/2011 13:53	48	72	-24	513-BKGDS1A	133	
43	2/15/2011 13:56	56	72	-16	513-BKGDS1A	133	
44	2/15/2011 13:57	43	72	-29	513-BKGDS1A	133	
45	3/4/2011 13:21	65	72	-7	513-BKGDS1A	133	
46	3/4/2011 13:22	62	72	-10	513-BKGDS1A	133	
47	3/4/2011 13:23	40	72	-32	513-BKGDS1A	133	
48	3/4/2011 13:25	49	72	-23	513-BKGDS1A	133	
49	3/4/2011 13:26	82	72	10	513-BKGDS1A	133	
50	3/4/2011 13:27	71	72	-1	513-BKGDS1A	133	
51	3/4/2011 13:29	42	72	-30	513-BKGDS1A	133	
52	3/4/2011 13:30	73	72	1	513-BKGDS1A	133	
53	3/4/2011 13:32	62	72	-10	513-BKGDS1A	133	
54	3/4/2011 13:33	58	72	-14	513-BKGDS1A	133	
55	3/4/2011 13:34	53	72	-19	513-BKGDS1A	133	
56	3/4/2011 13:36	40	72	-32	513-BKGDS1A	133	
57	3/4/2011 13:37	61	72	-11	513-BKGDS1A	133	
58	3/4/2011 13:39	70	72	-2	513-BKGDS1A	133	
59	3/4/2011 13:40	50	72	-22	513-BKGDS1A	133	
60	3/4/2011 13:42	53	72	-19	513-BKGDS1A	133	
61	3/4/2011 13:43	44	72	-28	513-BKGDS1A	133	
62	3/4/2011 13:45	75	72	3	513-BKGDS1A	133	
63	3/4/2011 13:46	78	72	6	513-BKGDS1A	133	
64	3/4/2011 13:48	62	72	-10	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
65	5/6/2011 11:36	83	72	11	513-BKGDS1A	133	
66	5/6/2011 11:37	82	72	10	513-BKGDS1A	133	
67	6/7/2011 13:25	83	72	11	513-BKGDS1A	133	
68	6/7/2011 13:26	95	72	23	513-BKGDS1A	133	
69	6/7/2011 13:27	59	72	-13	513-BKGDS1A	133	
70	6/7/2011 13:29	60	72	-12	513-BKGDS1A	133	
71	6/7/2011 13:30	80	72	8	513-BKGDS1A	133	
72	6/7/2011 13:31	92	72	20	513-BKGDS1A	133	
73	6/7/2011 13:32	67	72	-5	513-BKGDS1A	133	
74	6/7/2011 13:34	95	72	23	513-BKGDS1A	133	
75	6/7/2011 13:35	83	72	11	513-BKGDS1A	133	
76	6/7/2011 13:36	76	72	4	513-BKGDS1A	133	
77	6/7/2011 13:38	63	72	-9	513-BKGDS1A	133	
78	6/7/2011 13:39	54	72	-18	513-BKGDS1A	133	
79	6/7/2011 13:41	57	72	-15	513-BKGDS1A	133	
80	6/7/2011 13:42	80	72	8	513-BKGDS1A	133	
81	6/7/2011 13:45	73	72	1	513-BKGDS1A	133	
82	6/7/2011 13:46	59	72	-13	513-BKGDS1A	133	
83	6/7/2011 13:48	57	72	-15	513-BKGDS1A	133	
84	6/7/2011 13:49	89	72	17	513-BKGDS1A	133	
85	6/7/2011 13:50	84	72	12	513-BKGDS1A	133	
86	6/7/2011 13:51	65	72	-7	513-BKGDS1A	133	
87	5/4/2012 12:46	167	199	-32	620-BKGDS1A	344	
88	5/4/2012 12:47	139	199	-60	620-BKGDS1A	344	
89	5/4/2012 12:48	174	199	-25	620-BKGDS1A	344	
90	5/4/2012 15:07	192	199	-7	620-BKGDS1A	344	
91	6/29/2012 13:37	143	199	-56	620-BKGDS1A	344	
92	8/7/2012 14:32	226	199	27	620-BKGDS1A	344	



TETRA TECH EC, INC.
 Hunters Point Shipyard
 San Francisco, CA

Gamma Direct Measurement Report

Site Area: 707 **Survey Unit:** 16 **Class:** 1 **Area:** 989.60 m² **Count Time:** 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
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Net Gamma cpm Min: -60

Summary Avg: -4

Max: 37

St Dev: 17

Readings > 3σ investigation level are highlighted in blue

* Background ID correlates to instrument reference area background identification number

Gamma measurements > 3σ investigation level are verified by 2360 beta measurements



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1	11/9/2010 7:30	38	72	-34	513-BKGDS1A	133	
2	11/9/2010 7:31	69	72	-3	513-BKGDS1A	133	
3	11/9/2010 7:31	83	72	11	513-BKGDS1A	133	
4	11/9/2010 7:31	56	72	-16	513-BKGDS1A	133	
5	11/9/2010 7:31	60	72	-12	513-BKGDS1A	133	
6	11/9/2010 7:31	85	72	13	513-BKGDS1A	133	
7	11/9/2010 7:31	55	72	-17	513-BKGDS1A	133	
8	11/9/2010 7:31	38	72	-34	513-BKGDS1A	133	
9	11/9/2010 7:31	67	72	-5	513-BKGDS1A	133	
10	11/9/2010 7:32	105	72	33	513-BKGDS1A	133	
11	11/9/2010 7:32	103	72	31	513-BKGDS1A	133	
12	11/9/2010 7:32	63	72	-9	513-BKGDS1A	133	
13	11/9/2010 7:32	58	72	-14	513-BKGDS1A	133	
14	11/9/2010 7:32	93	72	21	513-BKGDS1A	133	
15	11/9/2010 7:32	71	72	-1	513-BKGDS1A	133	
16	11/9/2010 7:32	52	72	-20	513-BKGDS1A	133	
17	11/9/2010 7:32	52	72	-20	513-BKGDS1A	133	
18	11/9/2010 7:32	88	72	16	513-BKGDS1A	133	
19	11/9/2010 7:33	67	72	-5	513-BKGDS1A	133	
20	11/9/2010 7:33	37	72	-35	513-BKGDS1A	133	
21	11/9/2010 7:33	33	72	-39	513-BKGDS1A	133	
22	11/9/2010 7:33	75	72	3	513-BKGDS1A	133	
23	11/9/2010 7:33	55	72	-17	513-BKGDS1A	133	
24	11/9/2010 7:33	59	72	-13	513-BKGDS1A	133	
25	11/9/2010 7:33	55	72	-17	513-BKGDS1A	133	
26	11/9/2010 7:33	78	72	6	513-BKGDS1A	133	
27	11/9/2010 7:34	60	72	-12	513-BKGDS1A	133	
28	11/9/2010 7:34	25	72	-47	513-BKGDS1A	133	
29	11/9/2010 7:34	41	72	-31	513-BKGDS1A	133	
30	11/9/2010 7:34	43	72	-29	513-BKGDS1A	133	
31	11/9/2010 7:34	70	72	-2	513-BKGDS1A	133	
32	11/9/2010 7:35	73	72	1	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
33	11/9/2010 7:35	72	72	0	513-BKGDS1A	133	
34	11/9/2010 7:35	73	72	1	513-BKGDS1A	133	
35	11/9/2010 7:35	96	72	24	513-BKGDS1A	133	
36	11/9/2010 7:35	106	72	34	513-BKGDS1A	133	
37	11/9/2010 7:35	77	72	5	513-BKGDS1A	133	
38	11/9/2010 7:35	75	72	3	513-BKGDS1A	133	
39	11/9/2010 7:35	56	72	-16	513-BKGDS1A	133	
40	11/9/2010 7:36	95	72	23	513-BKGDS1A	133	
41	11/9/2010 7:36	92	72	20	513-BKGDS1A	133	
42	11/9/2010 7:36	67	72	-5	513-BKGDS1A	133	
43	11/9/2010 7:36	76	72	4	513-BKGDS1A	133	
44	11/9/2010 7:36	61	72	-11	513-BKGDS1A	133	
45	11/9/2010 7:36	67	72	-5	513-BKGDS1A	133	
46	11/9/2010 7:36	52	72	-20	513-BKGDS1A	133	
47	11/9/2010 7:36	54	72	-18	513-BKGDS1A	133	
48	11/9/2010 7:36	71	72	-1	513-BKGDS1A	133	
49	11/9/2010 7:37	66	72	-6	513-BKGDS1A	133	
50	11/9/2010 7:37	68	72	-4	513-BKGDS1A	133	
51	11/9/2010 7:37	64	72	-8	513-BKGDS1A	133	
52	11/9/2010 7:37	46	72	-26	513-BKGDS1A	133	
53	11/9/2010 7:38	46	72	-26	513-BKGDS1A	133	
54	11/9/2010 7:38	42	72	-30	513-BKGDS1A	133	
55	11/9/2010 7:38	61	72	-11	513-BKGDS1A	133	
56	11/9/2010 7:38	67	72	-5	513-BKGDS1A	133	
57	11/9/2010 7:38	65	72	-7	513-BKGDS1A	133	
58	11/9/2010 7:38	75	72	3	513-BKGDS1A	133	
59	11/9/2010 7:38	70	72	-2	513-BKGDS1A	133	
60	11/9/2010 7:38	69	72	-3	513-BKGDS1A	133	
61	11/9/2010 7:39	59	72	-13	513-BKGDS1A	133	
62	11/9/2010 7:39	44	72	-28	513-BKGDS1A	133	
63	11/9/2010 7:39	41	72	-31	513-BKGDS1A	133	
64	11/9/2010 7:39	29	72	-43	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
65	11/9/2010 7:39	42	72	-30	513-BKGD51A	133	
66	11/9/2010 7:39	76	72	4	513-BKGD51A	133	
67	11/9/2010 7:39	57	72	-15	513-BKGD51A	133	
68	11/9/2010 7:39	76	72	4	513-BKGD51A	133	
69	11/9/2010 7:39	61	72	-11	513-BKGD51A	133	
70	11/9/2010 7:40	78	72	6	513-BKGD51A	133	
71	11/9/2010 7:40	91	72	19	513-BKGD51A	133	
72	11/9/2010 7:40	55	72	-17	513-BKGD51A	133	
73	11/9/2010 7:40	69	72	-3	513-BKGD51A	133	
74	11/9/2010 7:40	76	72	4	513-BKGD51A	133	
75	11/9/2010 7:40	52	72	-20	513-BKGD51A	133	
76	11/9/2010 7:40	38	72	-34	513-BKGD51A	133	
77	11/9/2010 7:40	36	72	-36	513-BKGD51A	133	
78	11/9/2010 7:41	43	72	-29	513-BKGD51A	133	
79	11/9/2010 7:41	36	72	-36	513-BKGD51A	133	
80	11/9/2010 7:41	49	72	-23	513-BKGD51A	133	
81	11/9/2010 7:41	55	72	-17	513-BKGD51A	133	
82	11/9/2010 7:42	46	72	-26	513-BKGD51A	133	
83	11/9/2010 7:42	46	72	-26	513-BKGD51A	133	
84	11/9/2010 7:42	65	72	-7	513-BKGD51A	133	
85	11/9/2010 7:42	40	72	-32	513-BKGD51A	133	
86	11/9/2010 7:42	61	72	-11	513-BKGD51A	133	
87	11/9/2010 7:42	79	72	7	513-BKGD51A	133	
88	11/9/2010 7:42	79	72	7	513-BKGD51A	133	
89	11/9/2010 7:42	72	72	0	513-BKGD51A	133	
90	11/9/2010 7:43	100	72	28	513-BKGD51A	133	
91	11/9/2010 7:43	126	72	54	513-BKGD51A	133	
92	11/9/2010 7:43	71	72	-1	513-BKGD51A	133	
93	11/9/2010 7:43	49	72	-23	513-BKGD51A	133	
94	11/9/2010 7:43	75	72	3	513-BKGD51A	133	
95	11/9/2010 7:43	63	72	-9	513-BKGD51A	133	
96	11/9/2010 7:43	43	72	-29	513-BKGD51A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
97	11/9/2010 7:43	58	72	-14	513-BKGDS1A	133	
98	11/9/2010 7:43	74	72	2	513-BKGDS1A	133	
99	11/9/2010 7:44	77	72	5	513-BKGDS1A	133	
100	11/9/2010 7:44	72	72	0	513-BKGDS1A	133	
101	11/9/2010 7:44	55	72	-17	513-BKGDS1A	133	
102	11/9/2010 7:44	61	72	-11	513-BKGDS1A	133	
103	11/9/2010 7:44	49	72	-23	513-BKGDS1A	133	
104	11/9/2010 7:44	70	72	-2	513-BKGDS1A	133	
105	11/9/2010 7:45	42	72	-30	513-BKGDS1A	133	
106	11/9/2010 7:45	24	72	-48	513-BKGDS1A	133	
107	11/9/2010 7:45	39	72	-33	513-BKGDS1A	133	
108	11/9/2010 7:45	48	72	-24	513-BKGDS1A	133	
109	11/9/2010 7:45	40	72	-32	513-BKGDS1A	133	
110	11/9/2010 7:46	56	72	-16	513-BKGDS1A	133	
111	11/9/2010 7:46	59	72	-13	513-BKGDS1A	133	
112	11/9/2010 7:46	95	72	23	513-BKGDS1A	133	
113	11/9/2010 7:46	125	72	53	513-BKGDS1A	133	
114	11/9/2010 7:46	110	72	38	513-BKGDS1A	133	
115	11/9/2010 7:46	70	72	-2	513-BKGDS1A	133	
116	11/9/2010 7:46	40	72	-32	513-BKGDS1A	133	
117	11/9/2010 7:46	63	72	-9	513-BKGDS1A	133	
118	11/9/2010 7:47	99	72	27	513-BKGDS1A	133	
119	11/9/2010 7:47	83	72	11	513-BKGDS1A	133	
120	11/9/2010 7:47	74	72	2	513-BKGDS1A	133	
121	11/9/2010 7:47	61	72	-11	513-BKGDS1A	133	
122	11/9/2010 7:47	76	72	4	513-BKGDS1A	133	
123	11/9/2010 7:47	58	72	-14	513-BKGDS1A	133	
124	11/9/2010 7:47	47	72	-25	513-BKGDS1A	133	
125	11/9/2010 7:47	50	72	-22	513-BKGDS1A	133	
126	11/9/2010 7:47	48	72	-24	513-BKGDS1A	133	
127	11/9/2010 7:48	102	72	30	513-BKGDS1A	133	
128	11/9/2010 7:48	121	72	49	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
129	11/9/2010 7:48	112	72	40	513-BKGDS1A	133	
130	11/9/2010 7:48	75	72	3	513-BKGDS1A	133	
131	11/9/2010 7:49	32	72	-40	513-BKGDS1A	133	
132	11/9/2010 7:50	53	72	-19	513-BKGDS1A	133	
133	11/9/2010 7:50	73	72	1	513-BKGDS1A	133	
134	11/9/2010 7:50	57	72	-15	513-BKGDS1A	133	
135	11/9/2010 7:50	59	72	-13	513-BKGDS1A	133	
136	11/9/2010 7:50	61	72	-11	513-BKGDS1A	133	
137	11/9/2010 7:50	79	72	7	513-BKGDS1A	133	
138	11/9/2010 7:50	65	72	-7	513-BKGDS1A	133	
139	11/9/2010 7:50	62	72	-10	513-BKGDS1A	133	
140	11/9/2010 7:51	52	72	-20	513-BKGDS1A	133	
141	11/9/2010 7:51	73	72	1	513-BKGDS1A	133	
142	11/9/2010 7:51	68	72	-4	513-BKGDS1A	133	
143	11/9/2010 7:51	75	72	3	513-BKGDS1A	133	
144	11/9/2010 7:51	68	72	-4	513-BKGDS1A	133	
145	11/9/2010 7:51	59	72	-13	513-BKGDS1A	133	
146	11/9/2010 7:51	55	72	-17	513-BKGDS1A	133	
147	11/9/2010 7:51	76	72	4	513-BKGDS1A	133	
148	11/9/2010 7:51	66	72	-6	513-BKGDS1A	133	
149	11/9/2010 7:52	53	72	-19	513-BKGDS1A	133	
150	11/9/2010 7:52	56	72	-16	513-BKGDS1A	133	
151	11/9/2010 7:52	105	72	33	513-BKGDS1A	133	
152	11/9/2010 7:52	62	72	-10	513-BKGDS1A	133	
153	11/9/2010 7:52	70	72	-2	513-BKGDS1A	133	
154	11/9/2010 7:52	68	72	-4	513-BKGDS1A	133	
155	11/9/2010 7:52	66	72	-6	513-BKGDS1A	133	
156	11/9/2010 7:53	65	72	-7	513-BKGDS1A	133	
157	11/9/2010 7:53	60	72	-12	513-BKGDS1A	133	
158	11/9/2010 7:53	60	72	-12	513-BKGDS1A	133	
159	11/9/2010 7:53	85	72	13	513-BKGDS1A	133	
160	11/9/2010 7:54	73	72	1	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
161	11/9/2010 7:54	100	72	28	513-BKGDS1A	133	
162	11/9/2010 7:54	94	72	22	513-BKGDS1A	133	
163	11/9/2010 7:54	102	72	30	513-BKGDS1A	133	
164	11/9/2010 7:54	79	72	7	513-BKGDS1A	133	
165	11/9/2010 7:54	66	72	-6	513-BKGDS1A	133	
166	11/9/2010 7:54	56	72	-16	513-BKGDS1A	133	
167	11/9/2010 7:54	58	72	-14	513-BKGDS1A	133	
168	11/9/2010 7:54	53	72	-19	513-BKGDS1A	133	
169	11/9/2010 7:55	64	72	-8	513-BKGDS1A	133	
170	11/9/2010 7:55	72	72	0	513-BKGDS1A	133	
171	11/9/2010 7:55	62	72	-10	513-BKGDS1A	133	
172	11/9/2010 7:55	57	72	-15	513-BKGDS1A	133	
173	11/9/2010 7:55	57	72	-15	513-BKGDS1A	133	
174	11/9/2010 7:55	45	72	-27	513-BKGDS1A	133	
175	11/9/2010 7:55	65	72	-7	513-BKGDS1A	133	
176	11/9/2010 7:55	78	72	6	513-BKGDS1A	133	
177	11/9/2010 7:56	63	72	-9	513-BKGDS1A	133	
178	11/9/2010 7:56	76	72	4	513-BKGDS1A	133	
179	11/9/2010 7:56	98	72	26	513-BKGDS1A	133	
180	11/9/2010 7:57	34	72	-38	513-BKGDS1A	133	
181	11/9/2010 7:57	54	72	-18	513-BKGDS1A	133	
182	11/9/2010 7:57	69	72	-3	513-BKGDS1A	133	
183	11/9/2010 7:57	58	72	-14	513-BKGDS1A	133	
184	11/9/2010 7:57	68	72	-4	513-BKGDS1A	133	
185	11/9/2010 7:57	56	72	-16	513-BKGDS1A	133	
186	11/9/2010 7:57	50	72	-22	513-BKGDS1A	133	
187	11/9/2010 7:58	54	72	-18	513-BKGDS1A	133	
188	11/9/2010 7:58	49	72	-23	513-BKGDS1A	133	
189	11/9/2010 7:58	46	72	-26	513-BKGDS1A	133	
190	11/9/2010 7:58	42	72	-30	513-BKGDS1A	133	
191	11/9/2010 7:58	46	72	-26	513-BKGDS1A	133	
192	11/9/2010 7:58	47	72	-25	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
193	11/9/2010 7:58	45	72	-27	513-BKGD51A	133	
194	11/9/2010 7:58	60	72	-12	513-BKGD51A	133	
195	11/9/2010 7:58	56	72	-16	513-BKGD51A	133	
196	11/9/2010 7:59	52	72	-20	513-BKGD51A	133	
197	11/9/2010 7:59	55	72	-17	513-BKGD51A	133	
198	11/9/2010 7:59	46	72	-26	513-BKGD51A	133	
199	11/9/2010 7:59	75	72	3	513-BKGD51A	133	
200	11/9/2010 7:59	57	72	-15	513-BKGD51A	133	
201	11/9/2010 7:59	76	72	4	513-BKGD51A	133	
202	11/9/2010 7:59	51	72	-21	513-BKGD51A	133	
203	11/9/2010 8:00	21	72	-51	513-BKGD51A	133	
204	11/9/2010 8:00	44	72	-28	513-BKGD51A	133	
205	11/9/2010 8:00	68	72	-4	513-BKGD51A	133	
206	11/9/2010 8:00	75	72	3	513-BKGD51A	133	
207	11/9/2010 8:00	63	72	-9	513-BKGD51A	133	
208	11/9/2010 8:01	60	72	-12	513-BKGD51A	133	
209	11/9/2010 8:01	69	72	-3	513-BKGD51A	133	
210	11/9/2010 8:01	61	72	-11	513-BKGD51A	133	
211	11/9/2010 8:01	50	72	-22	513-BKGD51A	133	
212	11/9/2010 8:01	53	72	-19	513-BKGD51A	133	
213	11/9/2010 8:01	29	72	-43	513-BKGD51A	133	
214	11/9/2010 8:01	55	72	-17	513-BKGD51A	133	
215	11/9/2010 8:01	51	72	-21	513-BKGD51A	133	
216	11/9/2010 8:01	52	72	-20	513-BKGD51A	133	
217	11/9/2010 8:02	44	72	-28	513-BKGD51A	133	
218	11/9/2010 8:02	50	72	-22	513-BKGD51A	133	
219	11/9/2010 8:02	57	72	-15	513-BKGD51A	133	
220	11/9/2010 8:02	50	72	-22	513-BKGD51A	133	
221	11/9/2010 8:02	53	72	-19	513-BKGD51A	133	
222	11/9/2010 8:02	74	72	2	513-BKGD51A	133	
223	11/9/2010 8:02	64	72	-8	513-BKGD51A	133	
224	11/9/2010 8:02	80	72	8	513-BKGD51A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
225	11/9/2010 8:04	46	72	-26	513-BKGDS1A	133	
226	11/9/2010 8:04	30	72	-42	513-BKGDS1A	133	
227	11/9/2010 8:04	65	72	-7	513-BKGDS1A	133	
228	11/9/2010 8:04	50	72	-22	513-BKGDS1A	133	
229	11/9/2010 8:04	66	72	-6	513-BKGDS1A	133	
230	11/9/2010 8:04	66	72	-6	513-BKGDS1A	133	
231	11/9/2010 8:04	80	72	8	513-BKGDS1A	133	
232	11/9/2010 8:04	62	72	-10	513-BKGDS1A	133	
233	11/9/2010 8:05	61	72	-11	513-BKGDS1A	133	
234	11/9/2010 8:05	52	72	-20	513-BKGDS1A	133	
235	11/9/2010 8:05	55	72	-17	513-BKGDS1A	133	
236	11/9/2010 8:05	72	72	0	513-BKGDS1A	133	
237	11/9/2010 8:05	61	72	-11	513-BKGDS1A	133	
238	11/9/2010 8:05	50	72	-22	513-BKGDS1A	133	
239	11/9/2010 8:05	47	72	-25	513-BKGDS1A	133	
240	11/9/2010 8:05	61	72	-11	513-BKGDS1A	133	
241	11/9/2010 8:05	56	72	-16	513-BKGDS1A	133	
242	11/9/2010 8:06	67	72	-5	513-BKGDS1A	133	
243	11/9/2010 8:06	79	72	7	513-BKGDS1A	133	
244	11/9/2010 8:06	93	72	21	513-BKGDS1A	133	
245	11/9/2010 8:06	81	72	9	513-BKGDS1A	133	
246	11/9/2010 8:07	25	72	-47	513-BKGDS1A	133	
247	11/9/2010 8:07	35	72	-37	513-BKGDS1A	133	
248	11/9/2010 8:07	45	72	-27	513-BKGDS1A	133	
249	11/9/2010 8:07	38	72	-34	513-BKGDS1A	133	
250	11/9/2010 8:07	65	72	-7	513-BKGDS1A	133	
251	11/9/2010 8:07	68	72	-4	513-BKGDS1A	133	
252	11/9/2010 8:07	86	72	14	513-BKGDS1A	133	
253	11/9/2010 8:08	111	72	39	513-BKGDS1A	133	
254	11/9/2010 8:08	95	72	23	513-BKGDS1A	133	
255	11/9/2010 8:08	110	72	38	513-BKGDS1A	133	
256	11/9/2010 8:08	83	72	11	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
257	11/9/2010 8:08	53	72	-19	513-BKGDS1A	133	
258	11/9/2010 8:08	81	72	9	513-BKGDS1A	133	
259	11/9/2010 8:08	75	72	3	513-BKGDS1A	133	
260	11/9/2010 8:08	67	72	-5	513-BKGDS1A	133	
261	11/9/2010 8:08	74	72	2	513-BKGDS1A	133	
262	11/9/2010 8:09	76	72	4	513-BKGDS1A	133	
263	11/9/2010 8:09	52	72	-20	513-BKGDS1A	133	
264	11/9/2010 8:09	55	72	-17	513-BKGDS1A	133	
265	11/9/2010 8:09	40	72	-32	513-BKGDS1A	133	
266	11/9/2010 8:09	62	72	-10	513-BKGDS1A	133	
267	11/9/2010 8:11	52	72	-20	513-BKGDS1A	133	
268	11/9/2010 8:11	29	72	-43	513-BKGDS1A	133	
269	11/9/2010 8:11	40	72	-32	513-BKGDS1A	133	
270	11/9/2010 8:11	69	72	-3	513-BKGDS1A	133	
271	11/9/2010 8:11	128	72	56	513-BKGDS1A	133	
272	11/9/2010 8:11	89	72	17	513-BKGDS1A	133	
273	11/9/2010 8:12	72	72	0	513-BKGDS1A	133	
274	11/9/2010 8:12	77	72	5	513-BKGDS1A	133	
275	11/9/2010 8:12	60	72	-12	513-BKGDS1A	133	
276	11/9/2010 8:12	85	72	13	513-BKGDS1A	133	
277	11/9/2010 8:12	107	72	35	513-BKGDS1A	133	
278	11/9/2010 8:12	82	72	10	513-BKGDS1A	133	
279	11/9/2010 8:12	93	72	21	513-BKGDS1A	133	
280	11/9/2010 8:12	79	72	7	513-BKGDS1A	133	
281	11/9/2010 8:12	60	72	-12	513-BKGDS1A	133	
282	11/9/2010 8:13	72	72	0	513-BKGDS1A	133	
283	11/9/2010 8:13	54	72	-18	513-BKGDS1A	133	
284	11/9/2010 8:13	53	72	-19	513-BKGDS1A	133	
285	11/9/2010 8:13	60	72	-12	513-BKGDS1A	133	
286	11/9/2010 8:13	85	72	13	513-BKGDS1A	133	
287	11/9/2010 8:14	40	72	-32	513-BKGDS1A	133	
288	11/9/2010 8:14	78	72	6	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
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Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
289	11/9/2010 8:14	73	72	1	513-BKGDS1A	133	
290	11/9/2010 8:14	86	72	14	513-BKGDS1A	133	
291	11/9/2010 8:14	108	72	36	513-BKGDS1A	133	
292	11/9/2010 8:14	85	72	13	513-BKGDS1A	133	
293	11/9/2010 8:14	63	72	-9	513-BKGDS1A	133	
294	11/9/2010 8:15	66	72	-6	513-BKGDS1A	133	
295	11/9/2010 8:15	77	72	5	513-BKGDS1A	133	
296	11/9/2010 8:15	70	72	-2	513-BKGDS1A	133	
297	11/9/2010 8:15	87	72	15	513-BKGDS1A	133	
298	11/9/2010 8:15	56	72	-16	513-BKGDS1A	133	
299	11/9/2010 8:15	64	72	-8	513-BKGDS1A	133	
300	11/9/2010 8:15	66	72	-6	513-BKGDS1A	133	
301	11/9/2010 8:15	85	72	13	513-BKGDS1A	133	
302	11/9/2010 8:15	83	72	11	513-BKGDS1A	133	
303	11/9/2010 8:16	68	72	-4	513-BKGDS1A	133	
304	11/9/2010 8:16	72	72	0	513-BKGDS1A	133	
305	11/9/2010 8:16	77	72	5	513-BKGDS1A	133	
306	11/9/2010 8:16	94	72	22	513-BKGDS1A	133	
307	11/9/2010 8:17	38	72	-34	513-BKGDS1A	133	
308	11/9/2010 8:17	39	72	-33	513-BKGDS1A	133	
309	11/9/2010 8:17	49	72	-23	513-BKGDS1A	133	
310	11/9/2010 8:17	69	72	-3	513-BKGDS1A	133	
311	11/9/2010 8:17	60	72	-12	513-BKGDS1A	133	
312	11/9/2010 8:17	92	72	20	513-BKGDS1A	133	
313	11/9/2010 8:17	63	72	-9	513-BKGDS1A	133	
314	11/9/2010 8:18	64	72	-8	513-BKGDS1A	133	
315	11/9/2010 8:18	94	72	22	513-BKGDS1A	133	
316	11/9/2010 8:18	81	72	9	513-BKGDS1A	133	
317	11/9/2010 8:18	73	72	1	513-BKGDS1A	133	
318	11/9/2010 8:18	78	72	6	513-BKGDS1A	133	
319	11/9/2010 8:18	78	72	6	513-BKGDS1A	133	
320	11/9/2010 8:18	87	72	15	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
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Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
321	11/9/2010 8:18	87	72	15	513-BKGDS1A	133	
322	11/9/2010 8:19	63	72	-9	513-BKGDS1A	133	
323	11/9/2010 8:19	66	72	-6	513-BKGDS1A	133	
324	11/9/2010 8:19	75	72	3	513-BKGDS1A	133	
325	11/9/2010 8:19	75	72	3	513-BKGDS1A	133	
326	11/9/2010 8:19	68	72	-4	513-BKGDS1A	133	
327	11/9/2010 8:20	67	72	-5	513-BKGDS1A	133	
328	11/9/2010 8:20	24	72	-48	513-BKGDS1A	133	
329	11/9/2010 8:20	50	72	-22	513-BKGDS1A	133	
330	11/9/2010 8:20	90	72	18	513-BKGDS1A	133	
331	11/9/2010 8:20	73	72	1	513-BKGDS1A	133	
332	11/9/2010 8:20	81	72	9	513-BKGDS1A	133	
333	11/9/2010 8:20	98	72	26	513-BKGDS1A	133	
334	11/9/2010 8:21	83	72	11	513-BKGDS1A	133	
335	11/9/2010 8:21	82	72	10	513-BKGDS1A	133	
336	11/9/2010 8:21	59	72	-13	513-BKGDS1A	133	
337	11/9/2010 8:21	63	72	-9	513-BKGDS1A	133	
338	11/9/2010 8:21	45	72	-27	513-BKGDS1A	133	
339	11/9/2010 8:21	53	72	-19	513-BKGDS1A	133	
340	11/9/2010 8:21	73	72	1	513-BKGDS1A	133	
341	11/9/2010 8:21	68	72	-4	513-BKGDS1A	133	
342	11/9/2010 8:21	61	72	-11	513-BKGDS1A	133	
343	11/9/2010 8:22	65	72	-7	513-BKGDS1A	133	
344	11/9/2010 8:22	54	72	-18	513-BKGDS1A	133	
345	11/9/2010 8:22	72	72	0	513-BKGDS1A	133	
346	11/9/2010 8:23	21	72	-51	513-BKGDS1A	133	
347	11/9/2010 8:23	47	72	-25	513-BKGDS1A	133	
348	11/9/2010 8:23	30	72	-42	513-BKGDS1A	133	
349	11/9/2010 8:23	40	72	-32	513-BKGDS1A	133	
350	11/9/2010 8:23	31	72	-41	513-BKGDS1A	133	
351	11/9/2010 8:23	38	72	-34	513-BKGDS1A	133	
352	11/9/2010 8:23	34	72	-38	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
353	11/9/2010 8:23	44	72	-28	513-BKGDS1A	133	
354	11/9/2010 8:24	49	72	-23	513-BKGDS1A	133	
355	11/9/2010 8:24	86	72	14	513-BKGDS1A	133	
356	11/9/2010 8:24	75	72	3	513-BKGDS1A	133	
357	11/9/2010 8:24	117	72	45	513-BKGDS1A	133	
358	11/9/2010 8:24	86	72	14	513-BKGDS1A	133	
359	11/9/2010 8:24	75	72	3	513-BKGDS1A	133	
360	11/9/2010 8:24	68	72	-4	513-BKGDS1A	133	
361	11/9/2010 8:24	57	72	-15	513-BKGDS1A	133	
362	11/9/2010 8:24	64	72	-8	513-BKGDS1A	133	
363	11/9/2010 8:25	75	72	3	513-BKGDS1A	133	
364	11/9/2010 8:25	73	72	1	513-BKGDS1A	133	
365	11/9/2010 8:25	32	72	-40	513-BKGDS1A	133	
366	11/9/2010 8:25	50	72	-22	513-BKGDS1A	133	
367	11/9/2010 8:26	63	72	-9	513-BKGDS1A	133	
368	11/9/2010 8:26	78	72	6	513-BKGDS1A	133	
369	11/9/2010 8:26	53	72	-19	513-BKGDS1A	133	
370	11/9/2010 8:26	56	72	-16	513-BKGDS1A	133	
371	11/9/2010 8:26	58	72	-14	513-BKGDS1A	133	
372	11/9/2010 8:26	51	72	-21	513-BKGDS1A	133	
373	11/9/2010 8:26	51	72	-21	513-BKGDS1A	133	
374	11/9/2010 8:26	63	72	-9	513-BKGDS1A	133	
375	11/9/2010 8:27	51	72	-21	513-BKGDS1A	133	
376	11/9/2010 8:27	60	72	-12	513-BKGDS1A	133	
377	11/9/2010 8:27	50	72	-22	513-BKGDS1A	133	
378	11/9/2010 8:27	88	72	16	513-BKGDS1A	133	
379	11/9/2010 8:27	79	72	7	513-BKGDS1A	133	
380	11/9/2010 8:27	77	72	5	513-BKGDS1A	133	
381	11/9/2010 8:27	51	72	-21	513-BKGDS1A	133	
382	11/9/2010 8:27	46	72	-26	513-BKGDS1A	133	
383	11/9/2010 8:27	68	72	-4	513-BKGDS1A	133	
384	11/9/2010 8:28	53	72	-19	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
385	11/9/2010 8:28	54	72	-18	513-BKGDS1A	133	
386	11/9/2010 8:29	49	72	-23	513-BKGDS1A	133	
387	11/9/2010 8:29	34	72	-38	513-BKGDS1A	133	
388	11/9/2010 8:29	54	72	-18	513-BKGDS1A	133	
389	11/9/2010 8:29	47	72	-25	513-BKGDS1A	133	
390	11/9/2010 8:29	49	72	-23	513-BKGDS1A	133	
391	11/9/2010 8:29	68	72	-4	513-BKGDS1A	133	
392	11/9/2010 8:29	72	72	0	513-BKGDS1A	133	
393	11/9/2010 8:29	90	72	18	513-BKGDS1A	133	
394	11/9/2010 8:30	103	72	31	513-BKGDS1A	133	
395	11/9/2010 8:30	71	72	-1	513-BKGDS1A	133	
396	11/9/2010 8:30	81	72	9	513-BKGDS1A	133	
397	11/9/2010 8:30	105	72	33	513-BKGDS1A	133	
398	11/9/2010 8:30	74	72	2	513-BKGDS1A	133	
399	11/9/2010 8:30	90	72	18	513-BKGDS1A	133	
400	11/9/2010 8:30	82	72	10	513-BKGDS1A	133	
401	11/9/2010 8:30	73	72	1	513-BKGDS1A	133	
402	11/9/2010 8:30	49	72	-23	513-BKGDS1A	133	
403	11/9/2010 8:31	22	72	-50	513-BKGDS1A	133	
404	11/9/2010 8:31	44	72	-28	513-BKGDS1A	133	
405	11/9/2010 8:31	50	72	-22	513-BKGDS1A	133	
406	11/9/2010 8:31	81	72	9	513-BKGDS1A	133	
407	11/9/2010 8:32	74	72	2	513-BKGDS1A	133	
408	11/9/2010 8:32	69	72	-3	513-BKGDS1A	133	
409	11/9/2010 8:32	55	72	-17	513-BKGDS1A	133	
410	11/9/2010 8:32	83	72	11	513-BKGDS1A	133	
411	11/9/2010 8:32	77	72	5	513-BKGDS1A	133	
412	11/9/2010 8:32	60	72	-12	513-BKGDS1A	133	
413	11/9/2010 8:32	58	72	-14	513-BKGDS1A	133	
414	11/9/2010 8:32	70	72	-2	513-BKGDS1A	133	
415	11/9/2010 8:33	86	72	14	513-BKGDS1A	133	
416	11/9/2010 8:33	64	72	-8	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
417	11/9/2010 8:33	48	72	-24	513-BKGDS1A	133	
418	11/9/2010 8:33	55	72	-17	513-BKGDS1A	133	
419	11/9/2010 8:33	49	72	-23	513-BKGDS1A	133	
420	11/9/2010 8:33	59	72	-13	513-BKGDS1A	133	
421	11/9/2010 8:34	62	72	-10	513-BKGDS1A	133	
422	11/9/2010 8:34	57	72	-15	513-BKGDS1A	133	
423	11/9/2010 8:34	48	72	-24	513-BKGDS1A	133	
424	11/9/2010 8:35	50	72	-22	513-BKGDS1A	133	
425	11/9/2010 8:35	53	72	-19	513-BKGDS1A	133	
426	11/9/2010 8:35	57	72	-15	513-BKGDS1A	133	
427	11/9/2010 8:35	70	72	-2	513-BKGDS1A	133	
428	11/9/2010 8:35	96	72	24	513-BKGDS1A	133	
429	11/9/2010 8:35	101	72	29	513-BKGDS1A	133	
430	11/9/2010 8:35	117	72	45	513-BKGDS1A	133	
431	11/9/2010 8:35	109	72	37	513-BKGDS1A	133	
432	11/9/2010 8:35	108	72	36	513-BKGDS1A	133	
433	11/9/2010 8:36	115	72	43	513-BKGDS1A	133	
434	11/9/2010 8:36	62	72	-10	513-BKGDS1A	133	
435	11/9/2010 8:36	90	72	18	513-BKGDS1A	133	
436	11/9/2010 8:36	83	72	11	513-BKGDS1A	133	
437	11/9/2010 8:36	79	72	7	513-BKGDS1A	133	
438	11/9/2010 8:36	77	72	5	513-BKGDS1A	133	
439	11/9/2010 9:22	44	72	-28	513-BKGDS1A	133	
440	11/9/2010 9:22	55	72	-17	513-BKGDS1A	133	
441	11/9/2010 9:22	87	72	15	513-BKGDS1A	133	
442	11/9/2010 9:22	94	72	22	513-BKGDS1A	133	
443	11/9/2010 9:22	62	72	-10	513-BKGDS1A	133	
444	11/9/2010 9:22	69	72	-3	513-BKGDS1A	133	
445	11/9/2010 9:22	68	72	-4	513-BKGDS1A	133	
446	11/9/2010 9:23	64	72	-8	513-BKGDS1A	133	
447	11/9/2010 9:23	72	72	0	513-BKGDS1A	133	
448	11/9/2010 9:23	85	72	13	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
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Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
449	11/9/2010 9:23	66	72	-6	513-BKGD51A	133	
450	11/9/2010 9:23	86	72	14	513-BKGD51A	133	
451	11/9/2010 9:23	132	72	60	513-BKGD51A	133	
452	11/9/2010 9:23	105	72	33	513-BKGD51A	133	
453	11/9/2010 9:23	74	72	2	513-BKGD51A	133	
454	11/9/2010 9:23	78	72	6	513-BKGD51A	133	
455	11/9/2010 9:24	60	72	-12	513-BKGD51A	133	
456	11/9/2010 9:24	80	72	8	513-BKGD51A	133	
457	11/9/2010 9:24	40	72	-32	513-BKGD51A	133	
458	11/9/2010 9:25	53	72	-19	513-BKGD51A	133	
459	11/9/2010 9:25	51	72	-21	513-BKGD51A	133	
460	11/9/2010 9:25	50	72	-22	513-BKGD51A	133	
461	11/9/2010 9:25	61	72	-11	513-BKGD51A	133	
462	11/9/2010 9:25	57	72	-15	513-BKGD51A	133	
463	11/9/2010 9:25	67	72	-5	513-BKGD51A	133	
464	11/9/2010 9:25	69	72	-3	513-BKGD51A	133	
465	11/9/2010 9:25	71	72	-1	513-BKGD51A	133	
466	11/9/2010 9:25	49	72	-23	513-BKGD51A	133	
467	11/9/2010 9:26	53	72	-19	513-BKGD51A	133	
468	11/9/2010 9:26	79	72	7	513-BKGD51A	133	
469	11/9/2010 9:26	51	72	-21	513-BKGD51A	133	
470	11/9/2010 9:26	80	72	8	513-BKGD51A	133	
471	11/9/2010 9:26	98	72	26	513-BKGD51A	133	
472	11/9/2010 9:26	119	72	47	513-BKGD51A	133	
473	11/9/2010 9:26	106	72	34	513-BKGD51A	133	
474	11/9/2010 9:26	107	72	35	513-BKGD51A	133	
475	11/9/2010 9:30	40	72	-32	513-BKGD51A	133	
476	11/9/2010 9:30	78	72	6	513-BKGD51A	133	
477	11/9/2010 9:30	86	72	14	513-BKGD51A	133	
478	11/9/2010 9:30	64	72	-8	513-BKGD51A	133	
479	11/9/2010 9:30	89	72	17	513-BKGD51A	133	
480	11/9/2010 9:30	93	72	21	513-BKGD51A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
481	11/9/2010 9:31	51	72	-21	513-BKGDS1A	133	
482	11/9/2010 9:31	64	72	-8	513-BKGDS1A	133	
483	11/9/2010 9:31	97	72	25	513-BKGDS1A	133	
484	11/9/2010 9:31	110	72	38	513-BKGDS1A	133	
485	11/9/2010 9:31	84	72	12	513-BKGDS1A	133	
486	11/9/2010 9:31	79	72	7	513-BKGDS1A	133	
487	11/9/2010 9:31	67	72	-5	513-BKGDS1A	133	
488	11/9/2010 9:31	57	72	-15	513-BKGDS1A	133	
489	11/9/2010 9:31	55	72	-17	513-BKGDS1A	133	
490	11/9/2010 9:32	81	72	9	513-BKGDS1A	133	
491	11/9/2010 9:32	87	72	15	513-BKGDS1A	133	
492	11/9/2010 9:32	76	72	4	513-BKGDS1A	133	
493	11/9/2010 9:33	32	72	-40	513-BKGDS1A	133	
494	11/9/2010 9:34	56	72	-16	513-BKGDS1A	133	
495	11/9/2010 9:34	67	72	-5	513-BKGDS1A	133	
496	11/9/2010 9:34	64	72	-8	513-BKGDS1A	133	
497	11/9/2010 9:34	52	72	-20	513-BKGDS1A	133	
498	11/9/2010 9:34	35	72	-37	513-BKGDS1A	133	
499	11/9/2010 9:34	50	72	-22	513-BKGDS1A	133	
500	11/9/2010 9:34	67	72	-5	513-BKGDS1A	133	
501	11/9/2010 9:34	65	72	-7	513-BKGDS1A	133	
502	11/9/2010 9:34	77	72	5	513-BKGDS1A	133	
503	11/9/2010 9:35	66	72	-6	513-BKGDS1A	133	
504	11/9/2010 9:35	104	72	32	513-BKGDS1A	133	
505	11/9/2010 9:35	112	72	40	513-BKGDS1A	133	
506	11/9/2010 9:35	101	72	29	513-BKGDS1A	133	
507	11/9/2010 9:35	95	72	23	513-BKGDS1A	133	
508	11/9/2010 9:35	86	72	14	513-BKGDS1A	133	
509	11/9/2010 9:35	76	72	4	513-BKGDS1A	133	
510	11/9/2010 9:36	67	72	-5	513-BKGDS1A	133	
511	11/9/2010 9:36	39	72	-33	513-BKGDS1A	133	
512	11/9/2010 9:36	48	72	-24	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
513	11/9/2010 9:36	56	72	-16	513-BKGDS1A	133	
514	11/9/2010 9:36	83	72	11	513-BKGDS1A	133	
515	11/9/2010 9:37	91	72	19	513-BKGDS1A	133	
516	11/9/2010 9:37	87	72	15	513-BKGDS1A	133	
517	11/9/2010 9:37	80	72	8	513-BKGDS1A	133	
518	11/9/2010 9:37	71	72	-1	513-BKGDS1A	133	
519	11/9/2010 9:37	53	72	-19	513-BKGDS1A	133	
520	11/9/2010 9:37	48	72	-24	513-BKGDS1A	133	
521	11/9/2010 9:37	48	72	-24	513-BKGDS1A	133	
522	11/9/2010 9:37	83	72	11	513-BKGDS1A	133	
523	11/9/2010 9:37	72	72	0	513-BKGDS1A	133	
524	11/9/2010 9:38	66	72	-6	513-BKGDS1A	133	
525	11/9/2010 9:38	98	72	26	513-BKGDS1A	133	
526	11/9/2010 9:38	95	72	23	513-BKGDS1A	133	
527	11/9/2010 9:39	52	72	-20	513-BKGDS1A	133	
528	11/9/2010 9:39	63	72	-9	513-BKGDS1A	133	
529	11/9/2010 9:39	78	72	6	513-BKGDS1A	133	
530	11/9/2010 9:39	63	72	-9	513-BKGDS1A	133	
531	11/9/2010 9:39	70	72	-2	513-BKGDS1A	133	
532	11/9/2010 9:39	69	72	-3	513-BKGDS1A	133	
533	11/9/2010 9:39	94	72	22	513-BKGDS1A	133	
534	11/9/2010 9:39	76	72	4	513-BKGDS1A	133	
535	11/9/2010 9:40	73	72	1	513-BKGDS1A	133	
536	11/9/2010 9:40	60	72	-12	513-BKGDS1A	133	
537	11/9/2010 9:40	50	72	-22	513-BKGDS1A	133	
538	11/9/2010 9:40	75	72	3	513-BKGDS1A	133	
539	11/9/2010 9:40	60	72	-12	513-BKGDS1A	133	
540	11/9/2010 9:40	60	72	-12	513-BKGDS1A	133	
541	11/9/2010 9:40	68	72	-4	513-BKGDS1A	133	
542	11/9/2010 9:40	76	72	4	513-BKGDS1A	133	
543	11/9/2010 9:42	50	72	-22	513-BKGDS1A	133	
544	11/9/2010 9:42	79	72	7	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
545	11/9/2010 9:42	54	72	-18	513-BKGDS1A	133	
546	11/9/2010 9:42	73	72	1	513-BKGDS1A	133	
547	11/9/2010 9:43	57	72	-15	513-BKGDS1A	133	
548	11/9/2010 9:43	61	72	-11	513-BKGDS1A	133	
549	11/9/2010 9:43	85	72	13	513-BKGDS1A	133	
550	11/9/2010 9:43	92	72	20	513-BKGDS1A	133	
551	11/9/2010 9:43	81	72	9	513-BKGDS1A	133	
552	11/9/2010 9:43	69	72	-3	513-BKGDS1A	133	
553	11/9/2010 9:43	66	72	-6	513-BKGDS1A	133	
554	11/9/2010 9:43	86	72	14	513-BKGDS1A	133	
555	11/9/2010 9:43	118	72	46	513-BKGDS1A	133	
556	11/9/2010 9:44	102	72	30	513-BKGDS1A	133	
557	11/9/2010 9:44	92	72	20	513-BKGDS1A	133	
558	11/9/2010 9:44	60	72	-12	513-BKGDS1A	133	
559	11/9/2010 9:45	46	72	-26	513-BKGDS1A	133	
560	11/9/2010 9:45	62	72	-10	513-BKGDS1A	133	
561	11/9/2010 9:45	91	72	19	513-BKGDS1A	133	
562	11/9/2010 9:45	82	72	10	513-BKGDS1A	133	
563	11/9/2010 9:45	73	72	1	513-BKGDS1A	133	
564	11/9/2010 9:46	94	72	22	513-BKGDS1A	133	
565	11/9/2010 9:46	94	72	22	513-BKGDS1A	133	
566	11/9/2010 9:46	88	72	16	513-BKGDS1A	133	
567	11/9/2010 9:46	98	72	26	513-BKGDS1A	133	
568	11/9/2010 9:46	84	72	12	513-BKGDS1A	133	
569	11/9/2010 9:46	108	72	36	513-BKGDS1A	133	
570	11/9/2010 9:46	98	72	26	513-BKGDS1A	133	
571	11/9/2010 9:46	102	72	30	513-BKGDS1A	133	
572	11/9/2010 9:46	84	72	12	513-BKGDS1A	133	
573	11/9/2010 9:47	83	72	11	513-BKGDS1A	133	
574	11/9/2010 9:47	87	72	15	513-BKGDS1A	133	
575	11/9/2010 9:48	36	72	-36	513-BKGDS1A	133	
576	11/9/2010 9:48	43	72	-29	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
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Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
577	11/9/2010 9:48	77	72	5	513-BKGDS1A	133	
578	11/9/2010 9:48	67	72	-5	513-BKGDS1A	133	
579	11/9/2010 9:48	54	72	-18	513-BKGDS1A	133	
580	11/9/2010 9:48	72	72	0	513-BKGDS1A	133	
581	11/9/2010 9:48	87	72	15	513-BKGDS1A	133	
582	11/9/2010 9:49	105	72	33	513-BKGDS1A	133	
583	11/9/2010 9:49	83	72	11	513-BKGDS1A	133	
584	11/9/2010 9:49	83	72	11	513-BKGDS1A	133	
585	11/9/2010 9:49	81	72	9	513-BKGDS1A	133	
586	11/9/2010 9:49	68	72	-4	513-BKGDS1A	133	
587	11/9/2010 9:49	64	72	-8	513-BKGDS1A	133	
588	11/9/2010 9:49	75	72	3	513-BKGDS1A	133	
589	11/9/2010 9:49	82	72	10	513-BKGDS1A	133	
590	11/9/2010 9:49	101	72	29	513-BKGDS1A	133	
591	11/9/2010 9:50	49	72	-23	513-BKGDS1A	133	
592	11/9/2010 9:51	80	72	8	513-BKGDS1A	133	
593	11/9/2010 9:51	86	72	14	513-BKGDS1A	133	
594	11/9/2010 9:51	62	72	-10	513-BKGDS1A	133	
595	11/9/2010 9:51	72	72	0	513-BKGDS1A	133	
596	11/9/2010 9:51	100	72	28	513-BKGDS1A	133	
597	11/9/2010 9:51	83	72	11	513-BKGDS1A	133	
598	11/9/2010 9:51	91	72	19	513-BKGDS1A	133	
599	11/9/2010 9:51	73	72	1	513-BKGDS1A	133	
600	11/9/2010 9:52	68	72	-4	513-BKGDS1A	133	
601	11/9/2010 9:52	80	72	8	513-BKGDS1A	133	
602	11/9/2010 9:52	79	72	7	513-BKGDS1A	133	
603	11/9/2010 9:52	72	72	0	513-BKGDS1A	133	
604	11/9/2010 9:52	79	72	7	513-BKGDS1A	133	
605	11/9/2010 9:52	88	72	16	513-BKGDS1A	133	
606	11/9/2010 9:53	22	72	-50	513-BKGDS1A	133	
607	11/9/2010 9:53	38	72	-34	513-BKGDS1A	133	
608	11/9/2010 9:53	96	72	24	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
609	11/9/2010 9:53	66	72	-6	513-BKGDS1A	133	
610	11/9/2010 9:53	76	72	4	513-BKGDS1A	133	
611	11/9/2010 9:53	93	72	21	513-BKGDS1A	133	
612	11/9/2010 9:54	104	72	32	513-BKGDS1A	133	
613	11/9/2010 9:54	117	72	45	513-BKGDS1A	133	
614	11/9/2010 9:54	110	72	38	513-BKGDS1A	133	
615	11/9/2010 9:54	86	72	14	513-BKGDS1A	133	
616	11/9/2010 9:54	73	72	1	513-BKGDS1A	133	
617	11/9/2010 9:54	87	72	15	513-BKGDS1A	133	
618	11/9/2010 9:54	116	72	44	513-BKGDS1A	133	
619	11/9/2010 9:54	72	72	0	513-BKGDS1A	133	
620	11/9/2010 9:54	73	72	1	513-BKGDS1A	133	
621	11/9/2010 9:56	26	72	-46	513-BKGDS1A	133	
622	11/9/2010 9:56	28	72	-44	513-BKGDS1A	133	
623	11/9/2010 9:56	58	72	-14	513-BKGDS1A	133	
624	11/9/2010 9:56	86	72	14	513-BKGDS1A	133	
625	11/9/2010 9:56	112	72	40	513-BKGDS1A	133	
626	11/9/2010 9:56	64	72	-8	513-BKGDS1A	133	
627	11/9/2010 9:56	61	72	-11	513-BKGDS1A	133	
628	11/9/2010 9:56	70	72	-2	513-BKGDS1A	133	
629	11/9/2010 9:57	78	72	6	513-BKGDS1A	133	
630	11/9/2010 9:57	85	72	13	513-BKGDS1A	133	
631	11/9/2010 9:57	82	72	10	513-BKGDS1A	133	
632	11/9/2010 9:57	88	72	16	513-BKGDS1A	133	
633	11/9/2010 9:57	67	72	-5	513-BKGDS1A	133	
634	11/9/2010 9:57	100	72	28	513-BKGDS1A	133	
635	11/9/2010 9:57	75	72	3	513-BKGDS1A	133	
636	11/9/2010 10:02	45	72	-27	513-BKGDS1A	133	
637	11/9/2010 10:02	51	72	-21	513-BKGDS1A	133	
638	11/9/2010 10:02	69	72	-3	513-BKGDS1A	133	
639	11/9/2010 10:02	80	72	8	513-BKGDS1A	133	
640	11/9/2010 10:02	90	72	18	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
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Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
641	11/9/2010 10:02	70	72	-2	513-BKGDS1A	133	
642	11/9/2010 10:02	61	72	-11	513-BKGDS1A	133	
643	11/9/2010 10:02	44	72	-28	513-BKGDS1A	133	
644	11/9/2010 10:02	41	72	-31	513-BKGDS1A	133	
645	11/9/2010 10:03	35	72	-37	513-BKGDS1A	133	
646	11/9/2010 10:03	59	72	-13	513-BKGDS1A	133	
647	11/9/2010 10:03	81	72	9	513-BKGDS1A	133	
648	11/9/2010 10:03	96	72	24	513-BKGDS1A	133	
649	11/9/2010 10:03	97	72	25	513-BKGDS1A	133	
650	11/9/2010 10:04	28	72	-44	513-BKGDS1A	133	
651	11/9/2010 10:04	38	72	-34	513-BKGDS1A	133	
652	11/9/2010 10:04	57	72	-15	513-BKGDS1A	133	
653	11/9/2010 10:04	95	72	23	513-BKGDS1A	133	
654	11/9/2010 10:04	76	72	4	513-BKGDS1A	133	
655	11/9/2010 10:04	56	72	-16	513-BKGDS1A	133	
656	11/9/2010 10:05	81	72	9	513-BKGDS1A	133	
657	11/9/2010 10:05	60	72	-12	513-BKGDS1A	133	
658	11/9/2010 10:05	66	72	-6	513-BKGDS1A	133	
659	11/9/2010 10:05	88	72	16	513-BKGDS1A	133	
660	11/9/2010 10:05	84	72	12	513-BKGDS1A	133	
661	11/9/2010 10:05	105	72	33	513-BKGDS1A	133	
662	11/9/2010 10:05	80	72	8	513-BKGDS1A	133	
663	11/9/2010 10:05	68	72	-4	513-BKGDS1A	133	
664	11/9/2010 10:07	33	72	-39	513-BKGDS1A	133	
665	11/9/2010 10:07	35	72	-37	513-BKGDS1A	133	
666	11/9/2010 10:07	46	72	-26	513-BKGDS1A	133	
667	11/9/2010 10:07	25	72	-47	513-BKGDS1A	133	
668	11/9/2010 10:07	24	72	-48	513-BKGDS1A	133	
669	11/9/2010 10:07	78	72	6	513-BKGDS1A	133	
670	11/9/2010 10:07	74	72	2	513-BKGDS1A	133	
671	11/9/2010 10:07	70	72	-2	513-BKGDS1A	133	
672	11/9/2010 10:07	87	72	15	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
673	11/9/2010 10:08	66	72	-6	513-BKGDS1A	133	
674	11/9/2010 10:08	55	72	-17	513-BKGDS1A	133	
675	11/9/2010 10:08	61	72	-11	513-BKGDS1A	133	
676	11/9/2010 10:08	61	72	-11	513-BKGDS1A	133	
677	11/9/2010 10:09	25	72	-47	513-BKGDS1A	133	
678	11/9/2010 10:09	46	72	-26	513-BKGDS1A	133	
679	11/9/2010 10:09	79	72	7	513-BKGDS1A	133	
680	11/9/2010 10:09	77	72	5	513-BKGDS1A	133	
681	11/9/2010 10:09	92	72	20	513-BKGDS1A	133	
682	11/9/2010 10:10	84	72	12	513-BKGDS1A	133	
683	11/9/2010 10:10	108	72	36	513-BKGDS1A	133	
684	11/9/2010 10:10	94	72	22	513-BKGDS1A	133	
685	11/9/2010 10:10	68	72	-4	513-BKGDS1A	133	
686	11/9/2010 10:10	89	72	17	513-BKGDS1A	133	
687	11/9/2010 10:10	114	72	42	513-BKGDS1A	133	
688	11/9/2010 10:10	80	72	8	513-BKGDS1A	133	
689	11/9/2010 10:10	60	72	-12	513-BKGDS1A	133	
690	11/9/2010 10:11	75	72	3	513-BKGDS1A	133	
691	11/9/2010 10:11	40	72	-32	513-BKGDS1A	133	
692	11/9/2010 10:11	70	72	-2	513-BKGDS1A	133	
693	11/9/2010 10:11	75	72	3	513-BKGDS1A	133	
694	11/9/2010 10:11	76	72	4	513-BKGDS1A	133	
695	11/9/2010 10:12	63	72	-9	513-BKGDS1A	133	
696	11/9/2010 10:12	65	72	-7	513-BKGDS1A	133	
697	11/9/2010 10:12	86	72	14	513-BKGDS1A	133	
698	11/9/2010 10:12	123	72	51	513-BKGDS1A	133	
699	11/9/2010 10:12	102	72	30	513-BKGDS1A	133	
700	11/9/2010 10:13	27	72	-45	513-BKGDS1A	133	
701	11/9/2010 10:13	49	72	-23	513-BKGDS1A	133	
702	11/9/2010 10:13	62	72	-10	513-BKGDS1A	133	
703	11/9/2010 10:13	83	72	11	513-BKGDS1A	133	
704	11/9/2010 10:13	70	72	-2	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
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Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
705	11/9/2010 10:14	81	72	9	513-BKGDS1A	133	
706	11/9/2010 10:14	72	72	0	513-BKGDS1A	133	
707	11/9/2010 10:14	88	72	16	513-BKGDS1A	133	
708	11/9/2010 10:14	89	72	17	513-BKGDS1A	133	
709	11/9/2010 10:14	87	72	15	513-BKGDS1A	133	
710	11/9/2010 10:14	80	72	8	513-BKGDS1A	133	
711	11/9/2010 10:14	63	72	-9	513-BKGDS1A	133	
712	11/9/2010 10:14	61	72	-11	513-BKGDS1A	133	
713	11/9/2010 10:15	56	72	-16	513-BKGDS1A	133	
714	11/9/2010 10:15	47	72	-25	513-BKGDS1A	133	
715	11/9/2010 10:15	58	72	-14	513-BKGDS1A	133	
716	11/9/2010 10:16	99	72	27	513-BKGDS1A	133	
717	11/9/2010 10:16	85	72	13	513-BKGDS1A	133	
718	11/9/2010 10:16	67	72	-5	513-BKGDS1A	133	
719	11/9/2010 10:16	53	72	-19	513-BKGDS1A	133	
720	11/9/2010 10:16	62	72	-10	513-BKGDS1A	133	
721	11/9/2010 10:16	48	72	-24	513-BKGDS1A	133	
722	11/9/2010 10:16	60	72	-12	513-BKGDS1A	133	
723	11/9/2010 10:16	66	72	-6	513-BKGDS1A	133	
724	11/9/2010 10:17	81	72	9	513-BKGDS1A	133	
725	11/9/2010 10:17	70	72	-2	513-BKGDS1A	133	
726	11/9/2010 10:19	57	72	-15	513-BKGDS1A	133	
727	11/9/2010 10:19	28	72	-44	513-BKGDS1A	133	
728	11/9/2010 10:19	57	72	-15	513-BKGDS1A	133	
729	11/9/2010 10:19	46	72	-26	513-BKGDS1A	133	
730	11/9/2010 10:19	66	72	-6	513-BKGDS1A	133	
731	11/9/2010 10:20	40	72	-32	513-BKGDS1A	133	
732	11/9/2010 10:20	57	72	-15	513-BKGDS1A	133	
733	11/9/2010 10:20	79	72	7	513-BKGDS1A	133	
734	11/9/2010 10:32	36	72	-36	513-BKGDS1A	133	
735	11/9/2010 10:32	48	72	-24	513-BKGDS1A	133	
736	11/9/2010 10:32	82	72	10	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
737	11/9/2010 10:32	75	72	3	513-BKGDS1A	133	
738	11/9/2010 10:33	23	72	-49	513-BKGDS1A	133	
739	11/9/2010 10:33	66	72	-6	513-BKGDS1A	133	
740	11/9/2010 10:33	79	72	7	513-BKGDS1A	133	
741	11/9/2010 10:33	94	72	22	513-BKGDS1A	133	
742	11/9/2010 10:34	108	72	36	513-BKGDS1A	133	
743	11/9/2010 10:34	87	72	15	513-BKGDS1A	133	
744	11/9/2010 10:34	72	72	0	513-BKGDS1A	133	
745	11/9/2010 10:34	83	72	11	513-BKGDS1A	133	
746	11/9/2010 10:34	97	72	25	513-BKGDS1A	133	
747	11/9/2010 10:34	113	72	41	513-BKGDS1A	133	
748	11/9/2010 10:34	86	72	14	513-BKGDS1A	133	
749	11/9/2010 10:35	24	72	-48	513-BKGDS1A	133	
750	11/9/2010 10:36	56	72	-16	513-BKGDS1A	133	
751	11/9/2010 10:36	79	72	7	513-BKGDS1A	133	
752	11/9/2010 10:36	66	72	-6	513-BKGDS1A	133	
753	11/9/2010 10:36	75	72	3	513-BKGDS1A	133	
754	11/9/2010 10:36	103	72	31	513-BKGDS1A	133	
755	11/9/2010 10:36	118	72	46	513-BKGDS1A	133	
756	11/9/2010 10:36	110	72	38	513-BKGDS1A	133	
757	11/9/2010 10:36	85	72	13	513-BKGDS1A	133	
758	11/9/2010 10:36	105	72	33	513-BKGDS1A	133	
759	11/9/2010 10:37	92	72	20	513-BKGDS1A	133	
760	11/9/2010 10:37	83	72	11	513-BKGDS1A	133	
761	11/9/2010 10:37	71	72	-1	513-BKGDS1A	133	
762	11/9/2010 10:41	65	72	-7	513-BKGDS1A	133	
763	11/9/2010 10:41	49	72	-23	513-BKGDS1A	133	
764	11/9/2010 10:42	57	72	-15	513-BKGDS1A	133	
765	11/9/2010 10:42	83	72	11	513-BKGDS1A	133	
766	11/9/2010 10:42	67	72	-5	513-BKGDS1A	133	
767	11/9/2010 10:42	70	72	-2	513-BKGDS1A	133	
768	11/9/2010 10:42	72	72	0	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
769	11/9/2010 10:42	71	72	-1	513-BKGDS1A	133	
770	11/9/2010 10:42	49	72	-23	513-BKGDS1A	133	
771	11/9/2010 10:42	65	72	-7	513-BKGDS1A	133	
772	11/9/2010 10:43	46	72	-26	513-BKGDS1A	133	
773	11/9/2010 10:43	58	72	-14	513-BKGDS1A	133	
774	11/9/2010 10:43	94	72	22	513-BKGDS1A	133	
775	11/9/2010 10:44	105	72	33	513-BKGDS1A	133	
776	11/9/2010 10:44	77	72	5	513-BKGDS1A	133	
777	11/9/2010 10:44	64	72	-8	513-BKGDS1A	133	
778	11/9/2010 10:44	88	72	16	513-BKGDS1A	133	
779	11/9/2010 10:44	100	72	28	513-BKGDS1A	133	
780	11/9/2010 10:44	107	72	35	513-BKGDS1A	133	
781	11/9/2010 10:44	106	72	34	513-BKGDS1A	133	
782	11/9/2010 10:44	89	72	17	513-BKGDS1A	133	
783	11/9/2010 10:45	112	72	40	513-BKGDS1A	133	
784	11/9/2010 10:45	26	72	-46	513-BKGDS1A	133	
785	11/9/2010 10:45	48	72	-24	513-BKGDS1A	133	
786	11/9/2010 10:46	64	72	-8	513-BKGDS1A	133	
787	11/9/2010 10:46	81	72	9	513-BKGDS1A	133	
788	11/9/2010 10:46	76	72	4	513-BKGDS1A	133	
789	11/9/2010 10:46	71	72	-1	513-BKGDS1A	133	
790	11/9/2010 10:46	80	72	8	513-BKGDS1A	133	
791	11/9/2010 10:46	99	72	27	513-BKGDS1A	133	
792	11/9/2010 10:46	93	72	21	513-BKGDS1A	133	
793	11/9/2010 10:47	32	72	-40	513-BKGDS1A	133	
794	11/9/2010 10:47	75	72	3	513-BKGDS1A	133	
795	11/9/2010 10:47	70	72	-2	513-BKGDS1A	133	
796	11/9/2010 10:47	60	72	-12	513-BKGDS1A	133	
797	11/9/2010 10:47	81	72	9	513-BKGDS1A	133	
798	11/9/2010 10:47	73	72	1	513-BKGDS1A	133	
799	11/9/2010 10:48	101	72	29	513-BKGDS1A	133	
800	11/9/2010 10:48	98	72	26	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
801	11/9/2010 10:48	75	72	3	513-BKGDS1A	133	
802	11/9/2010 10:48	67	72	-5	513-BKGDS1A	133	
803	11/9/2010 10:49	50	72	-22	513-BKGDS1A	133	
804	11/9/2010 10:49	72	72	0	513-BKGDS1A	133	
805	11/9/2010 10:49	70	72	-2	513-BKGDS1A	133	
806	11/9/2010 10:49	67	72	-5	513-BKGDS1A	133	
807	11/9/2010 10:49	78	72	6	513-BKGDS1A	133	
808	11/9/2010 10:49	103	72	31	513-BKGDS1A	133	
809	11/9/2010 10:55	86	72	14	513-BKGDS1A	133	
810	11/9/2010 10:55	52	72	-20	513-BKGDS1A	133	
811	11/9/2010 10:55	72	72	0	513-BKGDS1A	133	
812	11/9/2010 10:56	69	72	-3	513-BKGDS1A	133	
813	11/9/2010 10:56	72	72	0	513-BKGDS1A	133	
814	11/9/2010 10:56	83	72	11	513-BKGDS1A	133	
815	11/9/2010 10:56	99	72	27	513-BKGDS1A	133	
816	11/9/2010 11:00	38	72	-34	513-BKGDS1A	133	
817	11/9/2010 11:00	66	72	-6	513-BKGDS1A	133	
818	11/9/2010 11:00	86	72	14	513-BKGDS1A	133	
819	11/9/2010 11:01	69	72	-3	513-BKGDS1A	133	
820	11/9/2010 11:01	80	72	8	513-BKGDS1A	133	
821	11/9/2010 11:01	20	72	-52	513-BKGDS1A	133	
822	11/9/2010 11:02	38	72	-34	513-BKGDS1A	133	
823	11/9/2010 11:02	67	72	-5	513-BKGDS1A	133	
824	11/9/2010 11:02	56	72	-16	513-BKGDS1A	133	
825	11/9/2010 11:02	78	72	6	513-BKGDS1A	133	
826	11/9/2010 11:03	29	72	-43	513-BKGDS1A	133	
827	11/9/2010 11:03	60	72	-12	513-BKGDS1A	133	
828	11/9/2010 11:03	64	72	-8	513-BKGDS1A	133	
829	11/9/2010 11:03	63	72	-9	513-BKGDS1A	133	
830	11/9/2010 11:03	31	72	-41	513-BKGDS1A	133	
831	11/9/2010 11:04	48	72	-24	513-BKGDS1A	133	
832	11/9/2010 11:04	50	72	-22	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
833	11/9/2010 11:04	68	72	-4	513-BKGDS1A	133	
834	11/9/2010 11:04	63	72	-9	513-BKGDS1A	133	
835	11/9/2010 11:06	57	72	-15	513-BKGDS1A	133	
836	11/9/2010 11:06	41	72	-31	513-BKGDS1A	133	
837	11/9/2010 11:07	54	72	-18	513-BKGDS1A	133	
838	11/9/2010 11:07	69	72	-3	513-BKGDS1A	133	
839	11/9/2010 11:24	56	72	-16	513-BKGDS1A	133	
840	11/9/2010 11:25	49	72	-23	513-BKGDS1A	133	
841	11/9/2010 11:25	33	72	-39	513-BKGDS1A	133	
842	11/9/2010 11:25	44	72	-28	513-BKGDS1A	133	
843	11/9/2010 11:25	37	72	-35	513-BKGDS1A	133	
844	11/9/2010 11:25	44	72	-28	513-BKGDS1A	133	
845	11/9/2010 11:25	38	72	-34	513-BKGDS1A	133	
846	11/9/2010 11:25	47	72	-25	513-BKGDS1A	133	
847	11/9/2010 11:25	68	72	-4	513-BKGDS1A	133	
848	11/9/2010 11:25	56	72	-16	513-BKGDS1A	133	
849	11/9/2010 11:27	35	72	-37	513-BKGDS1A	133	
850	11/9/2010 11:27	33	72	-39	513-BKGDS1A	133	
851	11/9/2010 11:27	34	72	-38	513-BKGDS1A	133	
852	11/9/2010 11:28	43	72	-29	513-BKGDS1A	133	
853	11/9/2010 11:28	43	72	-29	513-BKGDS1A	133	
854	11/9/2010 11:28	53	72	-19	513-BKGDS1A	133	
855	11/9/2010 11:28	65	72	-7	513-BKGDS1A	133	
856	11/9/2010 11:28	81	72	9	513-BKGDS1A	133	
857	11/9/2010 11:28	106	72	34	513-BKGDS1A	133	
858	11/9/2010 11:28	72	72	0	513-BKGDS1A	133	
859	11/9/2010 11:28	92	72	20	513-BKGDS1A	133	
860	11/9/2010 11:29	41	72	-31	513-BKGDS1A	133	
861	11/9/2010 11:29	62	72	-10	513-BKGDS1A	133	
862	11/9/2010 11:29	83	72	11	513-BKGDS1A	133	
863	11/9/2010 11:29	98	72	26	513-BKGDS1A	133	
864	11/9/2010 11:29	73	72	1	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
865	11/9/2010 11:29	66	72	-6	513-BKGDS1A	133	
866	11/9/2010 11:29	67	72	-5	513-BKGDS1A	133	
867	11/9/2010 11:29	58	72	-14	513-BKGDS1A	133	
868	11/9/2010 11:29	70	72	-2	513-BKGDS1A	133	
869	11/9/2010 11:30	73	72	1	513-BKGDS1A	133	
870	11/9/2010 11:30	82	72	10	513-BKGDS1A	133	
871	11/9/2010 11:30	82	72	10	513-BKGDS1A	133	
872	11/9/2010 11:30	62	72	-10	513-BKGDS1A	133	
873	11/9/2010 11:30	83	72	11	513-BKGDS1A	133	
874	11/9/2010 11:30	58	72	-14	513-BKGDS1A	133	
875	11/9/2010 11:30	86	72	14	513-BKGDS1A	133	
876	11/9/2010 11:30	73	72	1	513-BKGDS1A	133	
877	11/9/2010 11:30	59	72	-13	513-BKGDS1A	133	
878	11/9/2010 11:31	71	72	-1	513-BKGDS1A	133	
879	11/9/2010 11:32	71	72	-1	513-BKGDS1A	133	
880	11/9/2010 11:32	66	72	-6	513-BKGDS1A	133	
881	11/9/2010 11:32	61	72	-11	513-BKGDS1A	133	
882	11/9/2010 11:32	61	72	-11	513-BKGDS1A	133	
883	11/9/2010 11:32	46	72	-26	513-BKGDS1A	133	
884	11/9/2010 11:32	32	72	-40	513-BKGDS1A	133	
885	11/9/2010 11:33	35	72	-37	513-BKGDS1A	133	
886	11/9/2010 11:33	27	72	-45	513-BKGDS1A	133	
887	11/9/2010 11:33	35	72	-37	513-BKGDS1A	133	
888	11/9/2010 11:33	47	72	-25	513-BKGDS1A	133	
889	11/9/2010 11:33	47	72	-25	513-BKGDS1A	133	
890	11/9/2010 11:33	68	72	-4	513-BKGDS1A	133	
891	11/9/2010 11:33	49	72	-23	513-BKGDS1A	133	
892	11/9/2010 11:33	43	72	-29	513-BKGDS1A	133	
893	11/9/2010 11:34	52	72	-20	513-BKGDS1A	133	
894	11/9/2010 11:34	63	72	-9	513-BKGDS1A	133	
895	11/9/2010 11:34	72	72	0	513-BKGDS1A	133	
896	11/9/2010 11:34	55	72	-17	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
897	11/9/2010 11:34	57	72	-15	513-BKGDS1A	133	
898	11/9/2010 11:34	52	72	-20	513-BKGDS1A	133	
899	11/9/2010 11:34	64	72	-8	513-BKGDS1A	133	
900	11/9/2010 11:34	59	72	-13	513-BKGDS1A	133	
901	11/9/2010 11:34	74	72	2	513-BKGDS1A	133	
902	11/9/2010 11:35	68	72	-4	513-BKGDS1A	133	
903	11/9/2010 11:35	60	72	-12	513-BKGDS1A	133	
904	11/9/2010 11:35	41	72	-31	513-BKGDS1A	133	
905	11/9/2010 11:35	57	72	-15	513-BKGDS1A	133	
906	11/9/2010 11:35	96	72	24	513-BKGDS1A	133	
907	11/9/2010 11:35	66	72	-6	513-BKGDS1A	133	
908	11/9/2010 11:35	46	72	-26	513-BKGDS1A	133	
909	11/9/2010 11:35	71	72	-1	513-BKGDS1A	133	
910	11/9/2010 11:36	55	72	-17	513-BKGDS1A	133	
911	11/9/2010 11:36	45	72	-27	513-BKGDS1A	133	
912	11/9/2010 11:36	48	72	-24	513-BKGDS1A	133	
913	11/9/2010 11:36	38	72	-34	513-BKGDS1A	133	
914	11/9/2010 11:36	39	72	-33	513-BKGDS1A	133	
915	11/9/2010 11:36	41	72	-31	513-BKGDS1A	133	
916	11/9/2010 11:36	76	72	4	513-BKGDS1A	133	
917	11/9/2010 11:36	65	72	-7	513-BKGDS1A	133	
918	11/9/2010 11:36	48	72	-24	513-BKGDS1A	133	
919	11/9/2010 11:37	41	72	-31	513-BKGDS1A	133	
920	11/9/2010 11:37	48	72	-24	513-BKGDS1A	133	
921	11/9/2010 11:37	39	72	-33	513-BKGDS1A	133	
922	11/9/2010 11:38	53	72	-19	513-BKGDS1A	133	
923	11/9/2010 11:38	42	72	-30	513-BKGDS1A	133	
924	11/9/2010 11:38	41	72	-31	513-BKGDS1A	133	
925	11/9/2010 11:38	52	72	-20	513-BKGDS1A	133	
926	11/9/2010 11:38	55	72	-17	513-BKGDS1A	133	
927	11/9/2010 11:38	33	72	-39	513-BKGDS1A	133	
928	11/9/2010 11:38	50	72	-22	513-BKGDS1A	133	



TETRA TECH EC, INC.
 Hunters Point Shipyard
 San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
929	11/9/2010 11:38	40	72	-32	513-BKGDS1A	133	
930	11/9/2010 11:39	40	72	-32	513-BKGDS1A	133	
931	11/9/2010 11:39	50	72	-22	513-BKGDS1A	133	
932	11/9/2010 11:39	100	72	28	513-BKGDS1A	133	
933	11/9/2010 11:39	78	72	6	513-BKGDS1A	133	
934	11/9/2010 11:39	90	72	18	513-BKGDS1A	133	
935	11/9/2010 11:39	115	72	43	513-BKGDS1A	133	
936	11/9/2010 11:39	103	72	31	513-BKGDS1A	133	
937	11/9/2010 11:39	98	72	26	513-BKGDS1A	133	
938	11/9/2010 11:39	84	72	12	513-BKGDS1A	133	
939	11/9/2010 11:40	95	72	23	513-BKGDS1A	133	
940	11/9/2010 11:40	74	72	2	513-BKGDS1A	133	
941	11/9/2010 11:40	77	72	5	513-BKGDS1A	133	
942	11/9/2010 11:40	85	72	13	513-BKGDS1A	133	
943	11/9/2010 11:40	67	72	-5	513-BKGDS1A	133	
944	11/9/2010 11:40	54	72	-18	513-BKGDS1A	133	
945	11/9/2010 11:40	43	72	-29	513-BKGDS1A	133	
946	11/9/2010 11:40	88	72	16	513-BKGDS1A	133	
947	11/9/2010 11:41	63	72	-9	513-BKGDS1A	133	
948	11/9/2010 11:41	62	72	-10	513-BKGDS1A	133	
949	11/9/2010 11:41	57	72	-15	513-BKGDS1A	133	
950	11/9/2010 11:41	48	72	-24	513-BKGDS1A	133	
951	11/9/2010 11:41	62	72	-10	513-BKGDS1A	133	
952	11/9/2010 11:41	50	72	-22	513-BKGDS1A	133	
953	11/9/2010 11:41	49	72	-23	513-BKGDS1A	133	
954	11/9/2010 11:41	49	72	-23	513-BKGDS1A	133	
955	11/9/2010 11:41	65	72	-7	513-BKGDS1A	133	
956	11/9/2010 11:42	87	72	15	513-BKGDS1A	133	
957	11/9/2010 11:42	90	72	18	513-BKGDS1A	133	
958	11/9/2010 11:42	66	72	-6	513-BKGDS1A	133	
959	11/9/2010 11:43	22	72	-50	513-BKGDS1A	133	
960	11/9/2010 11:43	31	72	-41	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
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Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
961	11/9/2010 11:43	58	72	-14	513-BKGD51A	133	
962	11/9/2010 11:43	34	72	-38	513-BKGD51A	133	
963	11/9/2010 11:43	35	72	-37	513-BKGD51A	133	
964	11/9/2010 11:43	42	72	-30	513-BKGD51A	133	
965	11/9/2010 11:43	54	72	-18	513-BKGD51A	133	
966	11/9/2010 11:44	60	72	-12	513-BKGD51A	133	
967	11/9/2010 11:44	67	72	-5	513-BKGD51A	133	
968	11/9/2010 11:44	81	72	9	513-BKGD51A	133	
969	11/9/2010 11:44	79	72	7	513-BKGD51A	133	
970	11/9/2010 11:44	74	72	2	513-BKGD51A	133	
971	11/9/2010 11:44	52	72	-20	513-BKGD51A	133	
972	11/9/2010 11:44	51	72	-21	513-BKGD51A	133	
973	11/9/2010 11:44	42	72	-30	513-BKGD51A	133	
974	11/9/2010 11:44	35	72	-37	513-BKGD51A	133	
975	11/9/2010 11:45	50	72	-22	513-BKGD51A	133	
976	11/9/2010 11:45	63	72	-9	513-BKGD51A	133	
977	11/9/2010 11:45	49	72	-23	513-BKGD51A	133	
978	11/9/2010 11:45	50	72	-22	513-BKGD51A	133	
979	11/9/2010 11:45	65	72	-7	513-BKGD51A	133	
980	11/9/2010 11:45	58	72	-14	513-BKGD51A	133	
981	11/9/2010 11:45	50	72	-22	513-BKGD51A	133	
982	11/9/2010 11:45	48	72	-24	513-BKGD51A	133	
983	11/9/2010 11:46	54	72	-18	513-BKGD51A	133	
984	11/9/2010 11:46	54	72	-18	513-BKGD51A	133	
985	11/9/2010 11:46	57	72	-15	513-BKGD51A	133	
986	11/9/2010 11:46	65	72	-7	513-BKGD51A	133	
987	11/9/2010 11:46	49	72	-23	513-BKGD51A	133	
988	11/9/2010 11:46	72	72	0	513-BKGD51A	133	
989	11/9/2010 11:46	85	72	13	513-BKGD51A	133	
990	11/9/2010 11:46	95	72	23	513-BKGD51A	133	
991	11/9/2010 11:46	60	72	-12	513-BKGD51A	133	
992	11/9/2010 11:47	66	72	-6	513-BKGD51A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
993	11/9/2010 11:47	64	72	-8	513-BKGDS1A	133	
994	11/9/2010 11:47	60	72	-12	513-BKGDS1A	133	
995	11/9/2010 11:47	64	72	-8	513-BKGDS1A	133	
996	11/9/2010 11:47	67	72	-5	513-BKGDS1A	133	
997	11/9/2010 11:47	54	72	-18	513-BKGDS1A	133	
998	11/9/2010 11:47	41	72	-31	513-BKGDS1A	133	
999	11/9/2010 12:38	45	72	-27	513-BKGDS1A	133	
1000	11/9/2010 12:38	58	72	-14	513-BKGDS1A	133	
1001	11/9/2010 12:38	65	72	-7	513-BKGDS1A	133	
1002	11/9/2010 12:38	40	72	-32	513-BKGDS1A	133	
1003	11/9/2010 12:38	50	72	-22	513-BKGDS1A	133	
1004	11/9/2010 12:38	75	72	3	513-BKGDS1A	133	
1005	11/9/2010 12:38	85	72	13	513-BKGDS1A	133	
1006	11/9/2010 12:38	58	72	-14	513-BKGDS1A	133	
1007	11/9/2010 12:39	53	72	-19	513-BKGDS1A	133	
1008	11/9/2010 12:39	45	72	-27	513-BKGDS1A	133	
1009	11/9/2010 12:39	55	72	-17	513-BKGDS1A	133	
1010	11/9/2010 12:39	53	72	-19	513-BKGDS1A	133	
1011	11/9/2010 12:39	66	72	-6	513-BKGDS1A	133	
1012	11/9/2010 12:39	51	72	-21	513-BKGDS1A	133	
1013	11/9/2010 12:39	60	72	-12	513-BKGDS1A	133	
1014	11/9/2010 12:39	46	72	-26	513-BKGDS1A	133	
1015	11/9/2010 12:39	59	72	-13	513-BKGDS1A	133	
1016	11/9/2010 12:40	54	72	-18	513-BKGDS1A	133	
1017	11/9/2010 12:40	45	72	-27	513-BKGDS1A	133	
1018	11/9/2010 12:40	73	72	1	513-BKGDS1A	133	
1019	11/9/2010 12:40	66	72	-6	513-BKGDS1A	133	
1020	11/9/2010 12:40	104	72	32	513-BKGDS1A	133	
1021	11/9/2010 12:40	108	72	36	513-BKGDS1A	133	
1022	11/9/2010 12:40	99	72	27	513-BKGDS1A	133	
1023	11/9/2010 12:40	80	72	8	513-BKGDS1A	133	
1024	11/9/2010 12:41	57	72	-15	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
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Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1025	11/9/2010 12:41	47	72	-25	513-BKGDS1A	133	
1026	11/9/2010 12:41	62	72	-10	513-BKGDS1A	133	
1027	11/9/2010 12:41	63	72	-9	513-BKGDS1A	133	
1028	11/9/2010 12:41	48	72	-24	513-BKGDS1A	133	
1029	11/9/2010 12:41	68	72	-4	513-BKGDS1A	133	
1030	11/9/2010 12:41	55	72	-17	513-BKGDS1A	133	
1031	11/9/2010 12:41	61	72	-11	513-BKGDS1A	133	
1032	11/9/2010 12:41	87	72	15	513-BKGDS1A	133	
1033	11/9/2010 12:42	106	72	34	513-BKGDS1A	133	
1034	11/9/2010 12:42	54	72	-18	513-BKGDS1A	133	
1035	11/9/2010 12:42	61	72	-11	513-BKGDS1A	133	
1036	11/9/2010 12:42	65	72	-7	513-BKGDS1A	133	
1037	11/9/2010 12:42	58	72	-14	513-BKGDS1A	133	
1038	11/9/2010 12:42	31	72	-41	513-BKGDS1A	133	
1039	11/9/2010 12:43	21	72	-51	513-BKGDS1A	133	
1040	11/9/2010 12:43	52	72	-20	513-BKGDS1A	133	
1041	11/9/2010 12:43	67	72	-5	513-BKGDS1A	133	
1042	11/9/2010 12:43	109	72	37	513-BKGDS1A	133	
1043	11/9/2010 12:44	61	72	-11	513-BKGDS1A	133	
1044	11/9/2010 12:44	94	72	22	513-BKGDS1A	133	
1045	11/9/2010 12:44	107	72	35	513-BKGDS1A	133	
1046	11/9/2010 12:44	82	72	10	513-BKGDS1A	133	
1047	11/9/2010 12:44	57	72	-15	513-BKGDS1A	133	
1048	11/9/2010 12:44	70	72	-2	513-BKGDS1A	133	
1049	11/9/2010 12:44	80	72	8	513-BKGDS1A	133	
1050	11/9/2010 12:44	67	72	-5	513-BKGDS1A	133	
1051	11/9/2010 12:45	88	72	16	513-BKGDS1A	133	
1052	11/9/2010 12:45	83	72	11	513-BKGDS1A	133	
1053	11/9/2010 12:45	84	72	12	513-BKGDS1A	133	
1054	11/9/2010 12:45	74	72	2	513-BKGDS1A	133	
1055	11/9/2010 12:45	70	72	-2	513-BKGDS1A	133	
1056	11/9/2010 12:45	48	72	-24	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1057	11/9/2010 12:45	70	72	-2	513-BKGDS1A	133	
1058	11/9/2010 12:45	42	72	-30	513-BKGDS1A	133	
1059	11/9/2010 12:45	48	72	-24	513-BKGDS1A	133	
1060	11/9/2010 12:46	60	72	-12	513-BKGDS1A	133	
1061	11/9/2010 12:46	55	72	-17	513-BKGDS1A	133	
1062	11/9/2010 12:46	44	72	-28	513-BKGDS1A	133	
1063	11/9/2010 12:46	47	72	-25	513-BKGDS1A	133	
1064	11/9/2010 12:46	53	72	-19	513-BKGDS1A	133	
1065	11/9/2010 12:46	58	72	-14	513-BKGDS1A	133	
1066	11/9/2010 12:46	56	72	-16	513-BKGDS1A	133	
1067	11/9/2010 12:46	66	72	-6	513-BKGDS1A	133	
1068	11/9/2010 12:47	57	72	-15	513-BKGDS1A	133	
1069	11/9/2010 12:47	53	72	-19	513-BKGDS1A	133	
1070	11/9/2010 12:47	53	72	-19	513-BKGDS1A	133	
1071	11/9/2010 12:47	42	72	-30	513-BKGDS1A	133	
1072	11/9/2010 12:47	36	72	-36	513-BKGDS1A	133	
1073	11/9/2010 12:47	28	72	-44	513-BKGDS1A	133	
1074	11/9/2010 12:47	38	72	-34	513-BKGDS1A	133	
1075	11/9/2010 12:47	28	72	-44	513-BKGDS1A	133	
1076	11/9/2010 12:47	56	72	-16	513-BKGDS1A	133	
1077	11/9/2010 12:48	78	72	6	513-BKGDS1A	133	
1078	11/9/2010 12:48	58	72	-14	513-BKGDS1A	133	
1079	11/9/2010 12:49	68	72	-4	513-BKGDS1A	133	
1080	11/9/2010 12:49	38	72	-34	513-BKGDS1A	133	
1081	11/9/2010 12:49	49	72	-23	513-BKGDS1A	133	
1082	11/9/2010 12:49	46	72	-26	513-BKGDS1A	133	
1083	11/9/2010 12:49	29	72	-43	513-BKGDS1A	133	
1084	11/9/2010 12:49	44	72	-28	513-BKGDS1A	133	
1085	11/9/2010 12:50	48	72	-24	513-BKGDS1A	133	
1086	11/9/2010 12:50	69	72	-3	513-BKGDS1A	133	
1087	11/9/2010 12:50	53	72	-19	513-BKGDS1A	133	
1088	11/9/2010 12:50	55	72	-17	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1089	11/9/2010 12:50	30	72	-42	513-BKGDS1A	133	
1090	11/9/2010 12:50	27	72	-45	513-BKGDS1A	133	
1091	11/9/2010 12:50	49	72	-23	513-BKGDS1A	133	
1092	11/9/2010 12:50	45	72	-27	513-BKGDS1A	133	
1093	11/9/2010 12:50	43	72	-29	513-BKGDS1A	133	
1094	11/9/2010 12:51	35	72	-37	513-BKGDS1A	133	
1095	11/9/2010 12:51	53	72	-19	513-BKGDS1A	133	
1096	11/9/2010 12:51	70	72	-2	513-BKGDS1A	133	
1097	11/9/2010 12:51	69	72	-3	513-BKGDS1A	133	
1098	11/9/2010 12:51	84	72	12	513-BKGDS1A	133	
1099	11/9/2010 12:51	72	72	0	513-BKGDS1A	133	
1100	11/9/2010 12:51	77	72	5	513-BKGDS1A	133	
1101	11/9/2010 12:51	57	72	-15	513-BKGDS1A	133	
1102	11/9/2010 12:51	51	72	-21	513-BKGDS1A	133	
1103	11/9/2010 12:52	48	72	-24	513-BKGDS1A	133	
1104	11/9/2010 12:52	50	72	-22	513-BKGDS1A	133	
1105	11/9/2010 12:52	32	72	-40	513-BKGDS1A	133	
1106	11/9/2010 12:52	53	72	-19	513-BKGDS1A	133	
1107	11/9/2010 12:52	62	72	-10	513-BKGDS1A	133	
1108	11/9/2010 12:52	71	72	-1	513-BKGDS1A	133	
1109	11/9/2010 12:52	76	72	4	513-BKGDS1A	133	
1110	11/9/2010 12:52	75	72	3	513-BKGDS1A	133	
1111	11/9/2010 12:53	59	72	-13	513-BKGDS1A	133	
1112	11/9/2010 12:53	55	72	-17	513-BKGDS1A	133	
1113	11/9/2010 12:53	53	72	-19	513-BKGDS1A	133	
1114	11/9/2010 12:53	59	72	-13	513-BKGDS1A	133	
1115	11/9/2010 12:53	58	72	-14	513-BKGDS1A	133	
1116	11/9/2010 12:53	73	72	1	513-BKGDS1A	133	
1117	11/9/2010 12:54	55	72	-17	513-BKGDS1A	133	
1118	11/9/2010 12:54	51	72	-21	513-BKGDS1A	133	
1119	11/9/2010 12:54	80	72	8	513-BKGDS1A	133	
1120	11/9/2010 12:54	87	72	15	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1121	11/9/2010 12:54	90	72	18	513-BKGDS1A	133	
1122	11/9/2010 12:54	63	72	-9	513-BKGDS1A	133	
1123	11/9/2010 12:55	57	72	-15	513-BKGDS1A	133	
1124	11/9/2010 12:55	52	72	-20	513-BKGDS1A	133	
1125	11/9/2010 12:55	69	72	-3	513-BKGDS1A	133	
1126	11/9/2010 12:55	57	72	-15	513-BKGDS1A	133	
1127	11/9/2010 12:55	49	72	-23	513-BKGDS1A	133	
1128	11/9/2010 12:55	67	72	-5	513-BKGDS1A	133	
1129	11/9/2010 12:55	70	72	-2	513-BKGDS1A	133	
1130	11/9/2010 12:55	61	72	-11	513-BKGDS1A	133	
1131	11/9/2010 12:55	63	72	-9	513-BKGDS1A	133	
1132	11/9/2010 12:56	71	72	-1	513-BKGDS1A	133	
1133	11/9/2010 12:56	69	72	-3	513-BKGDS1A	133	
1134	11/9/2010 12:56	84	72	12	513-BKGDS1A	133	
1135	11/9/2010 12:56	68	72	-4	513-BKGDS1A	133	
1136	11/9/2010 12:56	82	72	10	513-BKGDS1A	133	
1137	11/9/2010 12:56	57	72	-15	513-BKGDS1A	133	
1138	11/9/2010 12:56	67	72	-5	513-BKGDS1A	133	
1139	11/9/2010 12:56	76	72	4	513-BKGDS1A	133	
1140	11/9/2010 12:57	58	72	-14	513-BKGDS1A	133	
1141	11/9/2010 12:57	69	72	-3	513-BKGDS1A	133	
1142	11/9/2010 12:57	61	72	-11	513-BKGDS1A	133	
1143	11/9/2010 12:57	65	72	-7	513-BKGDS1A	133	
1144	11/9/2010 12:57	51	72	-21	513-BKGDS1A	133	
1145	11/9/2010 12:57	64	72	-8	513-BKGDS1A	133	
1146	11/9/2010 12:57	52	72	-20	513-BKGDS1A	133	
1147	11/9/2010 12:57	43	72	-29	513-BKGDS1A	133	
1148	11/9/2010 12:57	65	72	-7	513-BKGDS1A	133	
1149	11/9/2010 12:58	71	72	-1	513-BKGDS1A	133	
1150	11/9/2010 12:58	54	72	-18	513-BKGDS1A	133	
1151	11/9/2010 12:58	44	72	-28	513-BKGDS1A	133	
1152	11/9/2010 12:58	64	72	-8	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1153	11/9/2010 12:58	86	72	14	513-BKGDS1A	133	
1154	11/9/2010 13:00	30	72	-42	513-BKGDS1A	133	
1155	11/9/2010 13:00	50	72	-22	513-BKGDS1A	133	
1156	11/9/2010 13:00	58	72	-14	513-BKGDS1A	133	
1157	11/9/2010 13:00	54	72	-18	513-BKGDS1A	133	
1158	11/9/2010 13:00	42	72	-30	513-BKGDS1A	133	
1159	11/9/2010 13:00	42	72	-30	513-BKGDS1A	133	
1160	11/9/2010 13:00	42	72	-30	513-BKGDS1A	133	
1161	11/9/2010 13:00	60	72	-12	513-BKGDS1A	133	
1162	11/9/2010 13:00	50	72	-22	513-BKGDS1A	133	
1163	11/9/2010 13:01	45	72	-27	513-BKGDS1A	133	
1164	11/9/2010 13:01	48	72	-24	513-BKGDS1A	133	
1165	11/9/2010 13:01	90	72	18	513-BKGDS1A	133	
1166	11/9/2010 13:01	99	72	27	513-BKGDS1A	133	
1167	11/9/2010 13:01	83	72	11	513-BKGDS1A	133	
1168	11/9/2010 13:01	69	72	-3	513-BKGDS1A	133	
1169	11/9/2010 13:01	70	72	-2	513-BKGDS1A	133	
1170	11/9/2010 13:01	64	72	-8	513-BKGDS1A	133	
1171	11/9/2010 13:02	69	72	-3	513-BKGDS1A	133	
1172	11/9/2010 13:02	64	72	-8	513-BKGDS1A	133	
1173	11/9/2010 13:02	63	72	-9	513-BKGDS1A	133	
1174	11/9/2010 13:02	49	72	-23	513-BKGDS1A	133	
1175	11/9/2010 13:02	77	72	5	513-BKGDS1A	133	
1176	11/9/2010 13:02	78	72	6	513-BKGDS1A	133	
1177	11/9/2010 13:02	56	72	-16	513-BKGDS1A	133	
1178	11/9/2010 13:02	56	72	-16	513-BKGDS1A	133	
1179	11/9/2010 13:02	41	72	-31	513-BKGDS1A	133	
1180	11/9/2010 13:03	51	72	-21	513-BKGDS1A	133	
1181	11/9/2010 13:03	56	72	-16	513-BKGDS1A	133	
1182	11/9/2010 13:03	54	72	-18	513-BKGDS1A	133	
1183	11/9/2010 13:03	42	72	-30	513-BKGDS1A	133	
1184	11/9/2010 13:03	45	72	-27	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
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Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1185	11/9/2010 13:03	42	72	-30	513-BKGDS1A	133	
1186	11/9/2010 13:03	35	72	-37	513-BKGDS1A	133	
1187	11/9/2010 13:03	66	72	-6	513-BKGDS1A	133	
1188	11/9/2010 13:04	56	72	-16	513-BKGDS1A	133	
1189	11/9/2010 13:04	65	72	-7	513-BKGDS1A	133	
1190	11/9/2010 13:06	27	72	-45	513-BKGDS1A	133	
1191	11/9/2010 13:06	59	72	-13	513-BKGDS1A	133	
1192	11/9/2010 13:06	58	72	-14	513-BKGDS1A	133	
1193	11/9/2010 13:06	65	72	-7	513-BKGDS1A	133	
1194	11/9/2010 13:07	71	72	-1	513-BKGDS1A	133	
1195	11/9/2010 13:07	71	72	-1	513-BKGDS1A	133	
1196	11/9/2010 13:07	48	72	-24	513-BKGDS1A	133	
1197	11/9/2010 13:07	67	72	-5	513-BKGDS1A	133	
1198	11/9/2010 13:07	61	72	-11	513-BKGDS1A	133	
1199	11/9/2010 13:07	55	72	-17	513-BKGDS1A	133	
1200	11/9/2010 13:07	35	72	-37	513-BKGDS1A	133	
1201	11/9/2010 13:07	43	72	-29	513-BKGDS1A	133	
1202	11/9/2010 13:08	49	72	-23	513-BKGDS1A	133	
1203	11/9/2010 13:08	79	72	7	513-BKGDS1A	133	
1204	11/9/2010 13:08	95	72	23	513-BKGDS1A	133	
1205	11/9/2010 13:08	65	72	-7	513-BKGDS1A	133	
1206	11/9/2010 13:08	56	72	-16	513-BKGDS1A	133	
1207	11/9/2010 13:08	69	72	-3	513-BKGDS1A	133	
1208	11/9/2010 13:08	101	72	29	513-BKGDS1A	133	
1209	11/9/2010 13:08	82	72	10	513-BKGDS1A	133	
1210	11/9/2010 13:08	64	72	-8	513-BKGDS1A	133	
1211	11/9/2010 13:09	72	72	0	513-BKGDS1A	133	
1212	11/9/2010 13:09	85	72	13	513-BKGDS1A	133	
1213	11/9/2010 13:09	59	72	-13	513-BKGDS1A	133	
1214	11/9/2010 13:09	63	72	-9	513-BKGDS1A	133	
1215	11/9/2010 13:09	61	72	-11	513-BKGDS1A	133	
1216	11/9/2010 13:09	45	72	-27	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1217	11/9/2010 13:09	70	72	-2	513-BKGDS1A	133	
1218	11/9/2010 13:09	52	72	-20	513-BKGDS1A	133	
1219	11/9/2010 13:10	85	72	13	513-BKGDS1A	133	
1220	11/9/2010 13:10	74	72	2	513-BKGDS1A	133	
1221	11/9/2010 13:10	49	72	-23	513-BKGDS1A	133	
1222	11/9/2010 13:10	30	72	-42	513-BKGDS1A	133	
1223	11/9/2010 13:10	51	72	-21	513-BKGDS1A	133	
1224	11/9/2010 13:10	31	72	-41	513-BKGDS1A	133	
1225	11/9/2010 13:11	102	72	30	513-BKGDS1A	133	
1226	11/9/2010 13:12	40	72	-32	513-BKGDS1A	133	
1227	11/9/2010 13:12	80	72	8	513-BKGDS1A	133	
1228	11/9/2010 13:12	84	72	12	513-BKGDS1A	133	
1229	11/9/2010 13:12	85	72	13	513-BKGDS1A	133	
1230	11/9/2010 13:12	89	72	17	513-BKGDS1A	133	
1231	11/9/2010 13:12	62	72	-10	513-BKGDS1A	133	
1232	11/9/2010 13:12	70	72	-2	513-BKGDS1A	133	
1233	11/9/2010 13:12	112	72	40	513-BKGDS1A	133	
1234	11/9/2010 13:12	125	72	53	513-BKGDS1A	133	
1235	11/9/2010 13:13	124	72	52	513-BKGDS1A	133	
1236	11/9/2010 13:13	105	72	33	513-BKGDS1A	133	
1237	11/9/2010 13:13	102	72	30	513-BKGDS1A	133	
1238	11/9/2010 13:13	108	72	36	513-BKGDS1A	133	
1239	11/9/2010 13:13	90	72	18	513-BKGDS1A	133	
1240	11/9/2010 13:13	79	72	7	513-BKGDS1A	133	
1241	11/9/2010 13:13	89	72	17	513-BKGDS1A	133	
1242	11/9/2010 13:13	72	72	0	513-BKGDS1A	133	
1243	11/9/2010 13:14	62	72	-10	513-BKGDS1A	133	
1244	11/9/2010 13:14	60	72	-12	513-BKGDS1A	133	
1245	11/9/2010 13:14	76	72	4	513-BKGDS1A	133	
1246	11/9/2010 13:14	67	72	-5	513-BKGDS1A	133	
1247	11/9/2010 13:14	80	72	8	513-BKGDS1A	133	
1248	11/9/2010 13:14	75	72	3	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1249	11/9/2010 13:14	62	72	-10	513-BKGDS1A	133	
1250	11/9/2010 13:14	55	72	-17	513-BKGDS1A	133	
1251	11/9/2010 13:14	54	72	-18	513-BKGDS1A	133	
1252	11/9/2010 13:15	66	72	-6	513-BKGDS1A	133	
1253	11/9/2010 13:15	70	72	-2	513-BKGDS1A	133	
1254	11/9/2010 13:15	81	72	9	513-BKGDS1A	133	
1255	11/9/2010 13:15	65	72	-7	513-BKGDS1A	133	
1256	11/9/2010 13:15	81	72	9	513-BKGDS1A	133	
1257	11/9/2010 13:15	52	72	-20	513-BKGDS1A	133	
1258	11/9/2010 13:15	47	72	-25	513-BKGDS1A	133	
1259	11/9/2010 13:16	30	72	-42	513-BKGDS1A	133	
1260	11/9/2010 13:16	52	72	-20	513-BKGDS1A	133	
1261	11/9/2010 13:16	66	72	-6	513-BKGDS1A	133	
1262	11/9/2010 13:16	62	72	-10	513-BKGDS1A	133	
1263	11/9/2010 13:16	91	72	19	513-BKGDS1A	133	
1264	11/9/2010 13:17	67	72	-5	513-BKGDS1A	133	
1265	11/9/2010 13:17	84	72	12	513-BKGDS1A	133	
1266	11/9/2010 13:17	89	72	17	513-BKGDS1A	133	
1267	11/9/2010 13:17	65	72	-7	513-BKGDS1A	133	
1268	11/9/2010 13:17	65	72	-7	513-BKGDS1A	133	
1269	11/9/2010 13:17	74	72	2	513-BKGDS1A	133	
1270	11/9/2010 13:17	92	72	20	513-BKGDS1A	133	
1271	11/9/2010 13:17	83	72	11	513-BKGDS1A	133	
1272	11/9/2010 13:18	80	72	8	513-BKGDS1A	133	
1273	11/9/2010 13:18	98	72	26	513-BKGDS1A	133	
1274	11/9/2010 13:18	83	72	11	513-BKGDS1A	133	
1275	11/9/2010 13:18	90	72	18	513-BKGDS1A	133	
1276	11/9/2010 13:18	98	72	26	513-BKGDS1A	133	
1277	11/9/2010 13:18	84	72	12	513-BKGDS1A	133	
1278	11/9/2010 13:18	87	72	15	513-BKGDS1A	133	
1279	11/9/2010 13:18	67	72	-5	513-BKGDS1A	133	
1280	11/9/2010 13:18	99	72	27	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1281	11/9/2010 13:19	68	72	-4	513-BKGDS1A	133	
1282	11/9/2010 13:19	59	72	-13	513-BKGDS1A	133	
1283	11/9/2010 13:19	61	72	-11	513-BKGDS1A	133	
1284	11/9/2010 13:19	77	72	5	513-BKGDS1A	133	
1285	11/9/2010 13:19	79	72	7	513-BKGDS1A	133	
1286	11/9/2010 13:19	69	72	-3	513-BKGDS1A	133	
1287	11/9/2010 13:19	93	72	21	513-BKGDS1A	133	
1288	11/9/2010 13:19	74	72	2	513-BKGDS1A	133	
1289	11/9/2010 13:20	77	72	5	513-BKGDS1A	133	
1290	11/9/2010 13:20	67	72	-5	513-BKGDS1A	133	
1291	11/9/2010 13:20	69	72	-3	513-BKGDS1A	133	
1292	11/9/2010 13:20	53	72	-19	513-BKGDS1A	133	
1293	11/9/2010 13:40	36	72	-36	513-BKGDS1A	133	
1294	11/9/2010 13:40	49	72	-23	513-BKGDS1A	133	
1295	11/9/2010 13:40	63	72	-9	513-BKGDS1A	133	
1296	11/9/2010 13:40	62	72	-10	513-BKGDS1A	133	
1297	11/9/2010 13:40	71	72	-1	513-BKGDS1A	133	
1298	11/9/2010 13:40	66	72	-6	513-BKGDS1A	133	
1299	11/9/2010 13:40	72	72	0	513-BKGDS1A	133	
1300	11/9/2010 13:40	95	72	23	513-BKGDS1A	133	
1301	11/9/2010 13:41	77	72	5	513-BKGDS1A	133	
1302	11/9/2010 13:41	98	72	26	513-BKGDS1A	133	
1303	11/9/2010 13:41	89	72	17	513-BKGDS1A	133	
1304	11/9/2010 13:41	60	72	-12	513-BKGDS1A	133	
1305	11/9/2010 13:41	97	72	25	513-BKGDS1A	133	
1306	11/9/2010 13:41	99	72	27	513-BKGDS1A	133	
1307	11/9/2010 13:41	98	72	26	513-BKGDS1A	133	
1308	11/9/2010 13:41	90	72	18	513-BKGDS1A	133	
1309	11/9/2010 13:41	99	72	27	513-BKGDS1A	133	
1310	11/9/2010 13:42	106	72	34	513-BKGDS1A	133	
1311	11/9/2010 13:42	79	72	7	513-BKGDS1A	133	
1312	11/9/2010 13:42	70	72	-2	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1313	11/9/2010 13:42	77	72	5	513-BKGDS1A	133	
1314	11/9/2010 13:42	63	72	-9	513-BKGDS1A	133	
1315	11/9/2010 13:42	55	72	-17	513-BKGDS1A	133	
1316	11/9/2010 13:42	55	72	-17	513-BKGDS1A	133	
1317	11/9/2010 13:42	58	72	-14	513-BKGDS1A	133	
1318	11/9/2010 13:43	60	72	-12	513-BKGDS1A	133	
1319	11/9/2010 13:43	48	72	-24	513-BKGDS1A	133	
1320	11/9/2010 13:43	30	72	-42	513-BKGDS1A	133	
1321	11/9/2010 13:43	43	72	-29	513-BKGDS1A	133	
1322	11/9/2010 13:43	31	72	-41	513-BKGDS1A	133	
1323	11/9/2010 13:43	63	72	-9	513-BKGDS1A	133	
1324	11/9/2010 13:43	70	72	-2	513-BKGDS1A	133	
1325	11/9/2010 13:43	59	72	-13	513-BKGDS1A	133	
1326	11/9/2010 13:44	39	72	-33	513-BKGDS1A	133	
1327	11/9/2010 13:44	26	72	-46	513-BKGDS1A	133	
1328	11/9/2010 13:44	53	72	-19	513-BKGDS1A	133	
1329	11/9/2010 13:45	45	72	-27	513-BKGDS1A	133	
1330	11/9/2010 13:45	79	72	7	513-BKGDS1A	133	
1331	11/9/2010 13:45	77	72	5	513-BKGDS1A	133	
1332	11/9/2010 13:45	69	72	-3	513-BKGDS1A	133	
1333	11/9/2010 13:45	71	72	-1	513-BKGDS1A	133	
1334	11/9/2010 13:45	71	72	-1	513-BKGDS1A	133	
1335	11/9/2010 13:45	53	72	-19	513-BKGDS1A	133	
1336	11/9/2010 13:45	64	72	-8	513-BKGDS1A	133	
1337	11/9/2010 13:45	87	72	15	513-BKGDS1A	133	
1338	11/9/2010 13:46	99	72	27	513-BKGDS1A	133	
1339	11/9/2010 13:46	80	72	8	513-BKGDS1A	133	
1340	11/9/2010 13:46	90	72	18	513-BKGDS1A	133	
1341	11/9/2010 13:46	95	72	23	513-BKGDS1A	133	
1342	11/9/2010 13:46	117	72	45	513-BKGDS1A	133	
1343	11/9/2010 13:46	119	72	47	513-BKGDS1A	133	
1344	11/9/2010 13:46	112	72	40	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1345	11/9/2010 13:46	91	72	19	513-BKGDS1A	133	
1346	11/9/2010 13:46	122	72	50	513-BKGDS1A	133	
1347	11/9/2010 13:47	113	72	41	513-BKGDS1A	133	
1348	11/9/2010 13:47	82	72	10	513-BKGDS1A	133	
1349	11/9/2010 13:47	100	72	28	513-BKGDS1A	133	
1350	11/9/2010 13:47	86	72	14	513-BKGDS1A	133	
1351	11/9/2010 13:47	99	72	27	513-BKGDS1A	133	
1352	11/9/2010 13:47	84	72	12	513-BKGDS1A	133	
1353	11/9/2010 13:47	98	72	26	513-BKGDS1A	133	
1354	11/9/2010 13:47	82	72	10	513-BKGDS1A	133	
1355	11/9/2010 13:48	71	72	-1	513-BKGDS1A	133	
1356	11/9/2010 13:48	56	72	-16	513-BKGDS1A	133	
1357	11/9/2010 13:48	64	72	-8	513-BKGDS1A	133	
1358	11/9/2010 13:49	57	72	-15	513-BKGDS1A	133	
1359	11/9/2010 13:49	58	72	-14	513-BKGDS1A	133	
1360	11/9/2010 13:49	83	72	11	513-BKGDS1A	133	
1361	11/9/2010 13:49	76	72	4	513-BKGDS1A	133	
1362	11/9/2010 13:49	86	72	14	513-BKGDS1A	133	
1363	11/9/2010 13:49	66	72	-6	513-BKGDS1A	133	
1364	11/9/2010 13:49	76	72	4	513-BKGDS1A	133	
1365	11/9/2010 13:49	82	72	10	513-BKGDS1A	133	
1366	11/9/2010 13:49	83	72	11	513-BKGDS1A	133	
1367	11/9/2010 13:50	109	72	37	513-BKGDS1A	133	
1368	11/9/2010 13:50	90	72	18	513-BKGDS1A	133	
1369	11/9/2010 13:50	73	72	1	513-BKGDS1A	133	
1370	11/9/2010 13:50	87	72	15	513-BKGDS1A	133	
1371	11/9/2010 13:50	97	72	25	513-BKGDS1A	133	
1372	11/9/2010 13:50	75	72	3	513-BKGDS1A	133	
1373	11/9/2010 13:50	87	72	15	513-BKGDS1A	133	
1374	11/9/2010 13:50	71	72	-1	513-BKGDS1A	133	
1375	11/9/2010 13:51	68	72	-4	513-BKGDS1A	133	
1376	11/9/2010 13:51	79	72	7	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1377	11/9/2010 13:51	93	72	21	513-BKGDS1A	133	
1378	11/9/2010 13:51	68	72	-4	513-BKGDS1A	133	
1379	11/9/2010 13:51	46	72	-26	513-BKGDS1A	133	
1380	11/9/2010 13:51	54	72	-18	513-BKGDS1A	133	
1381	11/9/2010 13:51	86	72	14	513-BKGDS1A	133	
1382	11/9/2010 13:51	66	72	-6	513-BKGDS1A	133	
1383	11/9/2010 13:51	83	72	11	513-BKGDS1A	133	
1384	11/9/2010 13:52	67	72	-5	513-BKGDS1A	133	
1385	11/9/2010 13:52	74	72	2	513-BKGDS1A	133	
1386	11/9/2010 13:52	60	72	-12	513-BKGDS1A	133	
1387	11/9/2010 13:52	50	72	-22	513-BKGDS1A	133	
1388	11/9/2010 13:52	54	72	-18	513-BKGDS1A	133	
1389	11/9/2010 13:54	36	72	-36	513-BKGDS1A	133	
1390	11/9/2010 13:54	52	72	-20	513-BKGDS1A	133	
1391	11/9/2010 13:54	61	72	-11	513-BKGDS1A	133	
1392	11/9/2010 13:54	53	72	-19	513-BKGDS1A	133	
1393	11/9/2010 13:54	52	72	-20	513-BKGDS1A	133	
1394	11/9/2010 13:55	61	72	-11	513-BKGDS1A	133	
1395	11/9/2010 13:55	58	72	-14	513-BKGDS1A	133	
1396	11/9/2010 13:55	50	72	-22	513-BKGDS1A	133	
1397	11/9/2010 13:55	54	72	-18	513-BKGDS1A	133	
1398	11/9/2010 13:55	99	72	27	513-BKGDS1A	133	
1399	11/9/2010 13:55	74	72	2	513-BKGDS1A	133	
1400	11/9/2010 13:55	62	72	-10	513-BKGDS1A	133	
1401	11/9/2010 13:55	54	72	-18	513-BKGDS1A	133	
1402	11/9/2010 13:55	105	72	33	513-BKGDS1A	133	
1403	11/9/2010 13:56	104	72	32	513-BKGDS1A	133	
1404	11/9/2010 13:56	87	72	15	513-BKGDS1A	133	
1405	11/9/2010 13:56	87	72	15	513-BKGDS1A	133	
1406	11/9/2010 13:56	106	72	34	513-BKGDS1A	133	
1407	11/9/2010 13:56	102	72	30	513-BKGDS1A	133	
1408	11/9/2010 13:56	104	72	32	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1409	11/9/2010 13:56	97	72	25	513-BKGDS1A	133	
1410	11/9/2010 13:56	99	72	27	513-BKGDS1A	133	
1411	11/9/2010 13:57	107	72	35	513-BKGDS1A	133	
1412	11/9/2010 13:57	93	72	21	513-BKGDS1A	133	
1413	11/9/2010 13:57	82	72	10	513-BKGDS1A	133	
1414	11/9/2010 13:57	72	72	0	513-BKGDS1A	133	
1415	11/9/2010 13:57	85	72	13	513-BKGDS1A	133	
1416	11/9/2010 13:57	82	72	10	513-BKGDS1A	133	
1417	11/9/2010 13:57	59	72	-13	513-BKGDS1A	133	
1418	11/9/2010 13:57	46	72	-26	513-BKGDS1A	133	
1419	11/9/2010 13:58	33	72	-39	513-BKGDS1A	133	
1420	11/9/2010 13:59	45	72	-27	513-BKGDS1A	133	
1421	11/9/2010 13:59	55	72	-17	513-BKGDS1A	133	
1422	11/9/2010 13:59	87	72	15	513-BKGDS1A	133	
1423	11/9/2010 13:59	112	72	40	513-BKGDS1A	133	
1424	11/9/2010 13:59	100	72	28	513-BKGDS1A	133	
1425	11/9/2010 13:59	101	72	29	513-BKGDS1A	133	
1426	11/9/2010 13:59	108	72	36	513-BKGDS1A	133	
1427	11/9/2010 13:59	76	72	4	513-BKGDS1A	133	
1428	11/9/2010 13:59	78	72	6	513-BKGDS1A	133	
1429	11/9/2010 14:00	62	72	-10	513-BKGDS1A	133	
1430	11/9/2010 14:00	77	72	5	513-BKGDS1A	133	
1431	11/9/2010 14:00	81	72	9	513-BKGDS1A	133	
1432	11/9/2010 14:00	50	72	-22	513-BKGDS1A	133	
1433	11/9/2010 14:00	60	72	-12	513-BKGDS1A	133	
1434	11/9/2010 14:00	75	72	3	513-BKGDS1A	133	
1435	11/9/2010 14:00	94	72	22	513-BKGDS1A	133	
1436	11/9/2010 14:00	110	72	38	513-BKGDS1A	133	
1437	11/9/2010 14:00	96	72	24	513-BKGDS1A	133	
1438	11/9/2010 14:01	69	72	-3	513-BKGDS1A	133	
1439	11/9/2010 14:01	83	72	11	513-BKGDS1A	133	
1440	11/9/2010 14:01	88	72	16	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1441	11/9/2010 14:01	65	72	-7	513-BKGDS1A	133	
1442	11/9/2010 14:01	63	72	-9	513-BKGDS1A	133	
1443	11/9/2010 14:01	59	72	-13	513-BKGDS1A	133	
1444	11/9/2010 14:01	60	72	-12	513-BKGDS1A	133	
1445	11/9/2010 14:01	59	72	-13	513-BKGDS1A	133	
1446	11/9/2010 14:02	64	72	-8	513-BKGDS1A	133	
1447	11/9/2010 14:02	58	72	-14	513-BKGDS1A	133	
1448	11/9/2010 14:07	57	72	-15	513-BKGDS1A	133	
1449	11/9/2010 14:07	50	72	-22	513-BKGDS1A	133	
1450	11/9/2010 14:07	49	72	-23	513-BKGDS1A	133	
1451	11/9/2010 14:07	59	72	-13	513-BKGDS1A	133	
1452	11/9/2010 14:07	77	72	5	513-BKGDS1A	133	
1453	11/9/2010 14:07	62	72	-10	513-BKGDS1A	133	
1454	11/9/2010 14:07	79	72	7	513-BKGDS1A	133	
1455	11/9/2010 14:07	85	72	13	513-BKGDS1A	133	
1456	11/9/2010 14:08	61	72	-11	513-BKGDS1A	133	
1457	11/9/2010 14:08	66	72	-6	513-BKGDS1A	133	
1458	11/9/2010 14:08	68	72	-4	513-BKGDS1A	133	
1459	11/9/2010 14:08	78	72	6	513-BKGDS1A	133	
1460	11/9/2010 14:08	76	72	4	513-BKGDS1A	133	
1461	11/9/2010 14:08	108	72	36	513-BKGDS1A	133	
1462	11/9/2010 14:08	96	72	24	513-BKGDS1A	133	
1463	11/9/2010 14:08	82	72	10	513-BKGDS1A	133	
1464	11/9/2010 14:08	101	72	29	513-BKGDS1A	133	
1465	11/9/2010 14:09	92	72	20	513-BKGDS1A	133	
1466	11/9/2010 14:09	79	72	7	513-BKGDS1A	133	
1467	11/9/2010 14:09	72	72	0	513-BKGDS1A	133	
1468	11/9/2010 14:09	84	72	12	513-BKGDS1A	133	
1469	11/9/2010 14:09	75	72	3	513-BKGDS1A	133	
1470	11/9/2010 14:09	92	72	20	513-BKGDS1A	133	
1471	11/9/2010 14:09	104	72	32	513-BKGDS1A	133	
1472	11/9/2010 14:09	89	72	17	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1473	11/9/2010 14:09	87	72	15	513-BKGDS1A	133	
1474	11/9/2010 14:10	84	72	12	513-BKGDS1A	133	
1475	11/9/2010 14:10	81	72	9	513-BKGDS1A	133	
1476	11/9/2010 14:10	48	72	-24	513-BKGDS1A	133	
1477	11/9/2010 14:10	58	72	-14	513-BKGDS1A	133	
1478	11/9/2010 14:10	80	72	8	513-BKGDS1A	133	
1479	11/9/2010 14:12	32	72	-40	513-BKGDS1A	133	
1480	11/9/2010 14:12	69	72	-3	513-BKGDS1A	133	
1481	11/9/2010 14:12	85	72	13	513-BKGDS1A	133	
1482	11/9/2010 14:12	83	72	11	513-BKGDS1A	133	
1483	11/9/2010 14:13	63	72	-9	513-BKGDS1A	133	
1484	11/9/2010 14:13	99	72	27	513-BKGDS1A	133	
1485	11/9/2010 14:13	84	72	12	513-BKGDS1A	133	
1486	11/9/2010 14:13	88	72	16	513-BKGDS1A	133	
1487	11/9/2010 14:13	90	72	18	513-BKGDS1A	133	
1488	11/9/2010 14:13	94	72	22	513-BKGDS1A	133	
1489	11/9/2010 14:13	79	72	7	513-BKGDS1A	133	
1490	11/9/2010 14:13	72	72	0	513-BKGDS1A	133	
1491	11/9/2010 14:14	85	72	13	513-BKGDS1A	133	
1492	11/9/2010 14:14	60	72	-12	513-BKGDS1A	133	
1493	11/9/2010 14:14	83	72	11	513-BKGDS1A	133	
1494	11/9/2010 14:14	81	72	9	513-BKGDS1A	133	
1495	11/9/2010 14:14	70	72	-2	513-BKGDS1A	133	
1496	11/9/2010 14:14	68	72	-4	513-BKGDS1A	133	
1497	11/9/2010 14:14	62	72	-10	513-BKGDS1A	133	
1498	11/9/2010 14:14	90	72	18	513-BKGDS1A	133	
1499	11/9/2010 14:14	60	72	-12	513-BKGDS1A	133	
1500	11/9/2010 14:15	62	72	-10	513-BKGDS1A	133	
1501	11/9/2010 14:15	51	72	-21	513-BKGDS1A	133	
1502	11/9/2010 14:15	68	72	-4	513-BKGDS1A	133	
1503	11/9/2010 14:15	66	72	-6	513-BKGDS1A	133	
1504	11/9/2010 14:15	60	72	-12	513-BKGDS1A	133	



TETRA TECH EC, INC.
 Hunters Point Shipyard
 San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1505	11/9/2010 14:15	71	72	-1	513-BKGDS1A	133	
1506	11/9/2010 14:16	24	72	-48	513-BKGDS1A	133	
1507	11/9/2010 14:16	49	72	-23	513-BKGDS1A	133	
1508	11/9/2010 14:16	56	72	-16	513-BKGDS1A	133	
1509	11/9/2010 14:16	60	72	-12	513-BKGDS1A	133	
1510	11/9/2010 14:17	60	72	-12	513-BKGDS1A	133	
1511	11/9/2010 14:17	70	72	-2	513-BKGDS1A	133	
1512	11/9/2010 14:17	62	72	-10	513-BKGDS1A	133	
1513	11/9/2010 14:17	77	72	5	513-BKGDS1A	133	
1514	11/9/2010 14:17	68	72	-4	513-BKGDS1A	133	
1515	11/9/2010 14:17	88	72	16	513-BKGDS1A	133	
1516	11/9/2010 14:17	81	72	9	513-BKGDS1A	133	
1517	11/9/2010 14:17	82	72	10	513-BKGDS1A	133	
1518	11/9/2010 14:17	73	72	1	513-BKGDS1A	133	
1519	11/9/2010 14:18	81	72	9	513-BKGDS1A	133	
1520	11/9/2010 14:18	72	72	0	513-BKGDS1A	133	
1521	11/9/2010 14:18	79	72	7	513-BKGDS1A	133	
1522	11/9/2010 14:18	68	72	-4	513-BKGDS1A	133	
1523	11/9/2010 14:18	79	72	7	513-BKGDS1A	133	
1524	11/9/2010 14:18	98	72	26	513-BKGDS1A	133	
1525	11/9/2010 14:18	99	72	27	513-BKGDS1A	133	
1526	11/9/2010 14:18	74	72	2	513-BKGDS1A	133	
1527	11/9/2010 14:19	71	72	-1	513-BKGDS1A	133	
1528	11/9/2010 14:19	80	72	8	513-BKGDS1A	133	
1529	11/9/2010 14:19	95	72	23	513-BKGDS1A	133	
1530	11/9/2010 14:19	100	72	28	513-BKGDS1A	133	
1531	11/9/2010 14:19	108	72	36	513-BKGDS1A	133	
1532	11/9/2010 14:20	44	72	-28	513-BKGDS1A	133	
1533	11/9/2010 14:20	65	72	-7	513-BKGDS1A	133	
1534	11/9/2010 14:20	47	72	-25	513-BKGDS1A	133	
1535	11/9/2010 14:20	80	72	8	513-BKGDS1A	133	
1536	11/9/2010 14:20	64	72	-8	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1537	11/9/2010 14:20	57	72	-15	513-BKGD51A	133	
1538	11/9/2010 14:21	50	72	-22	513-BKGD51A	133	
1539	11/9/2010 14:21	58	72	-14	513-BKGD51A	133	
1540	11/9/2010 14:21	53	72	-19	513-BKGD51A	133	
1541	11/9/2010 14:21	89	72	17	513-BKGD51A	133	
1542	11/9/2010 14:21	99	72	27	513-BKGD51A	133	
1543	11/9/2010 14:21	104	72	32	513-BKGD51A	133	
1544	11/9/2010 14:21	81	72	9	513-BKGD51A	133	
1545	11/9/2010 14:21	64	72	-8	513-BKGD51A	133	
1546	11/9/2010 14:22	89	72	17	513-BKGD51A	133	
1547	11/9/2010 14:22	66	72	-6	513-BKGD51A	133	
1548	11/9/2010 14:22	75	72	3	513-BKGD51A	133	
1549	11/9/2010 14:22	70	72	-2	513-BKGD51A	133	
1550	11/9/2010 14:22	103	72	31	513-BKGD51A	133	
1551	11/9/2010 14:22	105	72	33	513-BKGD51A	133	
1552	11/9/2010 14:22	95	72	23	513-BKGD51A	133	
1553	11/9/2010 14:22	78	72	6	513-BKGD51A	133	
1554	11/9/2010 14:22	68	72	-4	513-BKGD51A	133	
1555	11/9/2010 14:23	80	72	8	513-BKGD51A	133	
1556	11/9/2010 14:23	74	72	2	513-BKGD51A	133	
1557	11/9/2010 14:28	48	72	-24	513-BKGD51A	133	
1558	11/9/2010 14:28	38	72	-34	513-BKGD51A	133	
1559	11/9/2010 14:28	68	72	-4	513-BKGD51A	133	
1560	11/9/2010 14:28	69	72	-3	513-BKGD51A	133	
1561	11/9/2010 14:28	70	72	-2	513-BKGD51A	133	
1562	11/9/2010 14:28	93	72	21	513-BKGD51A	133	
1563	11/9/2010 14:28	90	72	18	513-BKGD51A	133	
1564	11/9/2010 14:29	109	72	37	513-BKGD51A	133	
1565	11/9/2010 14:29	103	72	31	513-BKGD51A	133	
1566	11/9/2010 14:29	85	72	13	513-BKGD51A	133	
1567	11/9/2010 14:29	98	72	26	513-BKGD51A	133	
1568	11/9/2010 14:29	80	72	8	513-BKGD51A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1569	11/9/2010 14:29	81	72	9	513-BKGDS1A	133	
1570	11/9/2010 14:29	63	72	-9	513-BKGDS1A	133	
1571	11/9/2010 14:29	80	72	8	513-BKGDS1A	133	
1572	11/9/2010 14:30	105	72	33	513-BKGDS1A	133	
1573	11/9/2010 14:30	91	72	19	513-BKGDS1A	133	
1574	11/9/2010 14:30	88	72	16	513-BKGDS1A	133	
1575	11/9/2010 14:30	83	72	11	513-BKGDS1A	133	
1576	11/9/2010 14:30	90	72	18	513-BKGDS1A	133	
1577	11/9/2010 14:30	87	72	15	513-BKGDS1A	133	
1578	11/9/2010 14:30	101	72	29	513-BKGDS1A	133	
1579	11/9/2010 14:30	95	72	23	513-BKGDS1A	133	
1580	11/9/2010 14:30	102	72	30	513-BKGDS1A	133	
1581	11/9/2010 14:31	70	72	-2	513-BKGDS1A	133	
1582	11/9/2010 14:31	91	72	19	513-BKGDS1A	133	
1583	11/9/2010 14:32	82	72	10	513-BKGDS1A	133	
1584	11/9/2010 14:32	119	72	47	513-BKGDS1A	133	
1585	11/9/2010 14:32	89	72	17	513-BKGDS1A	133	
1586	11/9/2010 14:32	82	72	10	513-BKGDS1A	133	
1587	11/9/2010 14:32	103	72	31	513-BKGDS1A	133	
1588	11/9/2010 14:32	83	72	11	513-BKGDS1A	133	
1589	11/9/2010 14:32	63	72	-9	513-BKGDS1A	133	
1590	11/9/2010 14:32	38	72	-34	513-BKGDS1A	133	
1591	11/9/2010 14:32	57	72	-15	513-BKGDS1A	133	
1592	11/9/2010 14:33	69	72	-3	513-BKGDS1A	133	
1593	11/9/2010 14:33	69	72	-3	513-BKGDS1A	133	
1594	11/9/2010 14:33	86	72	14	513-BKGDS1A	133	
1595	11/9/2010 14:33	93	72	21	513-BKGDS1A	133	
1596	11/9/2010 14:33	111	72	39	513-BKGDS1A	133	
1597	11/9/2010 14:33	88	72	16	513-BKGDS1A	133	
1598	11/9/2010 14:33	76	72	4	513-BKGDS1A	133	
1599	11/9/2010 14:33	68	72	-4	513-BKGDS1A	133	
1600	11/9/2010 14:34	72	72	0	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1601	11/9/2010 14:34	73	72	1	513-BKGDS1A	133	
1602	11/9/2010 14:34	69	72	-3	513-BKGDS1A	133	
1603	11/9/2010 14:34	81	72	9	513-BKGDS1A	133	
1604	11/9/2010 14:35	81	72	9	513-BKGDS1A	133	
1605	11/9/2010 14:35	53	72	-19	513-BKGDS1A	133	
1606	11/9/2010 14:36	47	72	-25	513-BKGDS1A	133	
1607	11/9/2010 14:36	39	72	-33	513-BKGDS1A	133	
1608	11/9/2010 14:36	57	72	-15	513-BKGDS1A	133	
1609	11/9/2010 14:36	80	72	8	513-BKGDS1A	133	
1610	11/9/2010 14:36	89	72	17	513-BKGDS1A	133	
1611	11/9/2010 14:36	105	72	33	513-BKGDS1A	133	
1612	11/9/2010 14:36	79	72	7	513-BKGDS1A	133	
1613	11/9/2010 14:36	87	72	15	513-BKGDS1A	133	
1614	11/9/2010 14:37	107	72	35	513-BKGDS1A	133	
1615	11/9/2010 14:37	99	72	27	513-BKGDS1A	133	
1616	11/9/2010 14:37	109	72	37	513-BKGDS1A	133	
1617	11/9/2010 14:37	77	72	5	513-BKGDS1A	133	
1618	11/9/2010 14:37	88	72	16	513-BKGDS1A	133	
1619	11/9/2010 14:37	85	72	13	513-BKGDS1A	133	
1620	11/9/2010 14:37	73	72	1	513-BKGDS1A	133	
1621	11/9/2010 14:37	61	72	-11	513-BKGDS1A	133	
1622	11/9/2010 14:37	87	72	15	513-BKGDS1A	133	
1623	11/9/2010 14:38	79	72	7	513-BKGDS1A	133	
1624	11/9/2010 14:38	96	72	24	513-BKGDS1A	133	
1625	11/9/2010 14:38	71	72	-1	513-BKGDS1A	133	
1626	11/9/2010 14:38	30	72	-42	513-BKGDS1A	133	
1627	11/9/2010 14:38	71	72	-1	513-BKGDS1A	133	
1628	11/9/2010 14:39	85	72	13	513-BKGDS1A	133	
1629	11/9/2010 14:39	65	72	-7	513-BKGDS1A	133	
1630	11/9/2010 14:39	70	72	-2	513-BKGDS1A	133	
1631	11/9/2010 14:39	62	72	-10	513-BKGDS1A	133	
1632	11/9/2010 14:39	64	72	-8	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1633	11/9/2010 14:39	65	72	-7	513-BKGDS1A	133	
1634	11/9/2010 14:39	48	72	-24	513-BKGDS1A	133	
1635	11/9/2010 14:39	42	72	-30	513-BKGDS1A	133	
1636	11/9/2010 14:40	47	72	-25	513-BKGDS1A	133	
1637	11/9/2010 14:40	50	72	-22	513-BKGDS1A	133	
1638	11/9/2010 14:40	58	72	-14	513-BKGDS1A	133	
1639	11/9/2010 14:40	58	72	-14	513-BKGDS1A	133	
1640	11/9/2010 14:40	61	72	-11	513-BKGDS1A	133	
1641	11/9/2010 14:40	116	72	44	513-BKGDS1A	133	
1642	11/9/2010 14:40	106	72	34	513-BKGDS1A	133	
1643	11/9/2010 14:40	94	72	22	513-BKGDS1A	133	
1644	11/9/2010 14:40	86	72	14	513-BKGDS1A	133	
1645	11/9/2010 14:41	93	72	21	513-BKGDS1A	133	
1646	11/9/2010 14:41	84	72	12	513-BKGDS1A	133	
1647	11/9/2010 14:41	69	72	-3	513-BKGDS1A	133	
1648	11/9/2010 14:42	31	72	-41	513-BKGDS1A	133	
1649	11/9/2010 14:42	59	72	-13	513-BKGDS1A	133	
1650	11/9/2010 14:42	63	72	-9	513-BKGDS1A	133	
1651	11/9/2010 14:42	93	72	21	513-BKGDS1A	133	
1652	11/9/2010 14:43	83	72	11	513-BKGDS1A	133	
1653	11/9/2010 14:43	74	72	2	513-BKGDS1A	133	
1654	11/9/2010 14:43	100	72	28	513-BKGDS1A	133	
1655	11/9/2010 14:43	106	72	34	513-BKGDS1A	133	
1656	11/9/2010 14:43	96	72	24	513-BKGDS1A	133	
1657	11/9/2010 14:43	96	72	24	513-BKGDS1A	133	
1658	11/9/2010 14:43	86	72	14	513-BKGDS1A	133	
1659	11/9/2010 14:43	55	72	-17	513-BKGDS1A	133	
1660	11/9/2010 14:44	39	72	-33	513-BKGDS1A	133	
1661	11/9/2010 14:44	62	72	-10	513-BKGDS1A	133	
1662	11/9/2010 14:44	59	72	-13	513-BKGDS1A	133	
1663	11/9/2010 14:44	61	72	-11	513-BKGDS1A	133	
1664	11/9/2010 14:44	77	72	5	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1665	11/9/2010 14:44	61	72	-11	513-BKGDS1A	133	
1666	11/9/2010 14:44	51	72	-21	513-BKGDS1A	133	
1667	11/9/2010 14:44	62	72	-10	513-BKGDS1A	133	
1668	11/9/2010 14:45	34	72	-38	513-BKGDS1A	133	
1669	11/9/2010 14:45	62	72	-10	513-BKGDS1A	133	
1670	11/9/2010 14:46	72	72	0	513-BKGDS1A	133	
1671	11/9/2010 14:46	92	72	20	513-BKGDS1A	133	
1672	11/9/2010 14:46	94	72	22	513-BKGDS1A	133	
1673	11/9/2010 14:46	86	72	14	513-BKGDS1A	133	
1674	11/9/2010 14:46	54	72	-18	513-BKGDS1A	133	
1675	11/9/2010 14:46	64	72	-8	513-BKGDS1A	133	
1676	11/9/2010 14:46	56	72	-16	513-BKGDS1A	133	
1677	11/9/2010 14:46	49	72	-23	513-BKGDS1A	133	
1678	11/9/2010 14:46	47	72	-25	513-BKGDS1A	133	
1679	11/9/2010 14:47	32	72	-40	513-BKGDS1A	133	
1680	11/9/2010 14:47	45	72	-27	513-BKGDS1A	133	
1681	11/9/2010 14:47	62	72	-10	513-BKGDS1A	133	
1682	11/9/2010 14:47	81	72	9	513-BKGDS1A	133	
1683	11/9/2010 14:47	85	72	13	513-BKGDS1A	133	
1684	11/9/2010 14:47	88	72	16	513-BKGDS1A	133	
1685	11/9/2010 14:47	91	72	19	513-BKGDS1A	133	
1686	11/9/2010 14:47	85	72	13	513-BKGDS1A	133	
1687	11/9/2010 14:48	36	72	-36	513-BKGDS1A	133	
1688	11/9/2010 14:48	60	72	-12	513-BKGDS1A	133	
1689	11/9/2010 14:48	57	72	-15	513-BKGDS1A	133	
1690	11/9/2010 14:48	83	72	11	513-BKGDS1A	133	
1691	11/9/2010 14:49	57	72	-15	513-BKGDS1A	133	
1692	11/9/2010 14:49	72	72	0	513-BKGDS1A	133	
1693	11/9/2010 14:49	58	72	-14	513-BKGDS1A	133	
1694	11/9/2010 14:49	82	72	10	513-BKGDS1A	133	
1695	11/9/2010 14:49	89	72	17	513-BKGDS1A	133	
1696	11/9/2010 14:49	76	72	4	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1697	11/9/2010 14:49	74	72	2	513-BKGDS1A	133	
1698	11/9/2010 14:49	80	72	8	513-BKGDS1A	133	
1699	11/9/2010 14:50	57	72	-15	513-BKGDS1A	133	
1700	11/9/2010 14:50	90	72	18	513-BKGDS1A	133	
1701	11/9/2010 14:50	61	72	-11	513-BKGDS1A	133	
1702	11/9/2010 14:50	45	72	-27	513-BKGDS1A	133	
1703	11/9/2010 14:51	34	72	-38	513-BKGDS1A	133	
1704	11/9/2010 14:51	46	72	-26	513-BKGDS1A	133	
1705	11/9/2010 14:51	69	72	-3	513-BKGDS1A	133	
1706	11/9/2010 14:51	57	72	-15	513-BKGDS1A	133	
1707	11/9/2010 14:51	94	72	22	513-BKGDS1A	133	
1708	11/9/2010 14:51	106	72	34	513-BKGDS1A	133	
1709	11/9/2010 14:51	87	72	15	513-BKGDS1A	133	
1710	11/9/2010 14:51	82	72	10	513-BKGDS1A	133	
1711	11/9/2010 14:52	53	72	-19	513-BKGDS1A	133	
1712	11/9/2010 14:52	64	72	-8	513-BKGDS1A	133	
1713	11/9/2010 14:52	100	72	28	513-BKGDS1A	133	
1714	11/9/2010 14:52	90	72	18	513-BKGDS1A	133	
1715	11/9/2010 14:52	70	72	-2	513-BKGDS1A	133	
1716	11/9/2010 14:52	77	72	5	513-BKGDS1A	133	
1717	11/9/2010 14:52	97	72	25	513-BKGDS1A	133	
1718	11/9/2010 14:53	43	72	-29	513-BKGDS1A	133	
1719	11/9/2010 14:53	51	72	-21	513-BKGDS1A	133	
1720	11/9/2010 14:54	70	72	-2	513-BKGDS1A	133	
1721	11/9/2010 14:54	91	72	19	513-BKGDS1A	133	
1722	11/9/2010 14:54	78	72	6	513-BKGDS1A	133	
1723	11/9/2010 14:54	64	72	-8	513-BKGDS1A	133	
1724	11/9/2010 14:54	53	72	-19	513-BKGDS1A	133	
1725	11/9/2010 14:54	48	72	-24	513-BKGDS1A	133	
1726	11/9/2010 14:54	47	72	-25	513-BKGDS1A	133	
1727	11/9/2010 14:54	39	72	-33	513-BKGDS1A	133	
1728	11/9/2010 14:54	52	72	-20	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1729	11/9/2010 14:55	78	72	6	513-BKGDS1A	133	
1730	11/9/2010 14:55	52	72	-20	513-BKGDS1A	133	
1731	11/9/2010 14:55	69	72	-3	513-BKGDS1A	133	
1732	11/9/2010 14:55	88	72	16	513-BKGDS1A	133	
1733	11/9/2010 14:56	60	72	-12	513-BKGDS1A	133	
1734	11/9/2010 14:56	85	72	13	513-BKGDS1A	133	
1735	11/9/2010 14:56	100	72	28	513-BKGDS1A	133	
1736	11/9/2010 14:56	68	72	-4	513-BKGDS1A	133	
1737	11/9/2010 14:56	87	72	15	513-BKGDS1A	133	
1738	11/9/2010 14:56	113	72	41	513-BKGDS1A	133	
1739	11/9/2010 14:56	67	72	-5	513-BKGDS1A	133	
1740	11/9/2010 14:56	73	72	1	513-BKGDS1A	133	
1741	11/9/2010 14:57	84	72	12	513-BKGDS1A	133	
1742	11/9/2010 14:57	99	72	27	513-BKGDS1A	133	
1743	11/9/2010 14:57	81	72	9	513-BKGDS1A	133	
1744	11/9/2010 14:57	106	72	34	513-BKGDS1A	133	
1745	11/9/2010 14:57	96	72	24	513-BKGDS1A	133	
1746	11/9/2010 14:57	85	72	13	513-BKGDS1A	133	
1747	11/9/2010 14:57	84	72	12	513-BKGDS1A	133	
1748	11/9/2010 15:08	37	72	-35	513-BKGDS1A	133	
1749	11/9/2010 15:09	45	72	-27	513-BKGDS1A	133	
1750	11/9/2010 15:09	41	72	-31	513-BKGDS1A	133	
1751	11/9/2010 15:09	35	72	-37	513-BKGDS1A	133	
1752	11/9/2010 15:09	69	72	-3	513-BKGDS1A	133	
1753	11/9/2010 15:09	73	72	1	513-BKGDS1A	133	
1754	11/9/2010 15:09	66	72	-6	513-BKGDS1A	133	
1755	11/9/2010 15:09	56	72	-16	513-BKGDS1A	133	
1756	11/9/2010 15:09	93	72	21	513-BKGDS1A	133	
1757	11/9/2010 15:09	124	72	52	513-BKGDS1A	133	
1758	11/9/2010 15:10	101	72	29	513-BKGDS1A	133	
1759	11/9/2010 15:10	79	72	7	513-BKGDS1A	133	
1760	11/9/2010 15:10	61	72	-11	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1761	11/9/2010 15:10	36	72	-36	513-BKGDS1A	133	
1762	11/9/2010 15:10	47	72	-25	513-BKGDS1A	133	
1763	11/9/2010 15:11	53	72	-19	513-BKGDS1A	133	
1764	11/9/2010 15:11	61	72	-11	513-BKGDS1A	133	
1765	11/9/2010 15:11	71	72	-1	513-BKGDS1A	133	
1766	11/9/2010 15:11	85	72	13	513-BKGDS1A	133	
1767	11/9/2010 15:11	82	72	10	513-BKGDS1A	133	
1768	11/9/2010 15:11	53	72	-19	513-BKGDS1A	133	
1769	11/9/2010 15:11	43	72	-29	513-BKGDS1A	133	
1770	11/9/2010 15:11	67	72	-5	513-BKGDS1A	133	
1771	11/9/2010 15:12	63	72	-9	513-BKGDS1A	133	
1772	11/9/2010 15:12	46	72	-26	513-BKGDS1A	133	
1773	11/9/2010 15:12	27	72	-45	513-BKGDS1A	133	
1774	11/9/2010 15:12	50	72	-22	513-BKGDS1A	133	
1775	11/9/2010 15:12	54	72	-18	513-BKGDS1A	133	
1776	11/9/2010 15:12	86	72	14	513-BKGDS1A	133	
1777	11/9/2010 15:13	68	72	-4	513-BKGDS1A	133	
1778	11/9/2010 15:13	46	72	-26	513-BKGDS1A	133	
1779	11/9/2010 15:13	61	72	-11	513-BKGDS1A	133	
1780	11/9/2010 15:13	57	72	-15	513-BKGDS1A	133	
1781	11/9/2010 15:13	55	72	-17	513-BKGDS1A	133	
1782	11/9/2010 15:13	48	72	-24	513-BKGDS1A	133	
1783	11/9/2010 15:13	55	72	-17	513-BKGDS1A	133	
1784	11/9/2010 15:14	21	72	-51	513-BKGDS1A	133	
1785	11/9/2010 15:14	47	72	-25	513-BKGDS1A	133	
1786	11/9/2010 15:14	54	72	-18	513-BKGDS1A	133	
1787	11/9/2010 15:14	79	72	7	513-BKGDS1A	133	
1788	11/9/2010 15:14	72	72	0	513-BKGDS1A	133	
1789	11/9/2010 15:15	98	72	26	513-BKGDS1A	133	
1790	11/9/2010 15:15	99	72	27	513-BKGDS1A	133	
1791	11/9/2010 15:15	83	72	11	513-BKGDS1A	133	
1792	11/9/2010 15:15	64	72	-8	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1793	11/9/2010 15:15	76	72	4	513-BKGD51A	133	
1794	11/9/2010 15:15	24	72	-48	513-BKGD51A	133	
1795	11/9/2010 15:16	57	72	-15	513-BKGD51A	133	
1796	11/9/2010 15:16	45	72	-27	513-BKGD51A	133	
1797	11/9/2010 15:16	49	72	-23	513-BKGD51A	133	
1798	11/9/2010 15:16	85	72	13	513-BKGD51A	133	
1799	11/9/2010 15:16	76	72	4	513-BKGD51A	133	
1800	11/9/2010 15:16	63	72	-9	513-BKGD51A	133	
1801	11/9/2010 15:16	37	72	-35	513-BKGD51A	133	
1802	11/9/2010 15:16	53	72	-19	513-BKGD51A	133	
1803	11/9/2010 15:17	34	72	-38	513-BKGD51A	133	
1804	11/9/2010 15:17	73	72	1	513-BKGD51A	133	
1805	11/9/2010 15:17	53	72	-19	513-BKGD51A	133	
1806	11/9/2010 15:17	82	72	10	513-BKGD51A	133	
1807	11/9/2010 15:17	90	72	18	513-BKGD51A	133	
1808	11/9/2010 15:18	87	72	15	513-BKGD51A	133	
1809	11/9/2010 15:18	64	72	-8	513-BKGD51A	133	
1810	11/9/2010 15:18	106	72	34	513-BKGD51A	133	
1811	11/9/2010 15:18	75	72	3	513-BKGD51A	133	
1812	11/9/2010 15:18	34	72	-38	513-BKGD51A	133	
1813	11/9/2010 15:19	23	72	-49	513-BKGD51A	133	
1814	11/9/2010 15:19	53	72	-19	513-BKGD51A	133	
1815	11/9/2010 15:19	58	72	-14	513-BKGD51A	133	
1816	11/9/2010 15:19	55	72	-17	513-BKGD51A	133	
1817	11/9/2010 15:19	73	72	1	513-BKGD51A	133	
1818	11/9/2010 15:19	83	72	11	513-BKGD51A	133	
1819	11/9/2010 15:20	35	72	-37	513-BKGD51A	133	
1820	11/9/2010 15:20	60	72	-12	513-BKGD51A	133	
1821	11/9/2010 15:20	46	72	-26	513-BKGD51A	133	
1822	11/9/2010 15:20	70	72	-2	513-BKGD51A	133	
1823	11/9/2010 15:20	82	72	10	513-BKGD51A	133	
1824	11/9/2010 15:20	77	72	5	513-BKGD51A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1825	11/9/2010 15:21	21	72	-51	513-BKGDS1A	133	
1826	11/9/2010 15:21	25	72	-47	513-BKGDS1A	133	
1827	11/9/2010 15:21	73	72	1	513-BKGDS1A	133	
1828	11/9/2010 15:21	66	72	-6	513-BKGDS1A	133	
1829	11/9/2010 15:21	56	72	-16	513-BKGDS1A	133	
1830	11/9/2010 15:21	58	72	-14	513-BKGDS1A	133	
1831	11/9/2010 15:21	67	72	-5	513-BKGDS1A	133	
1832	11/9/2010 15:22	50	72	-22	513-BKGDS1A	133	
1833	11/9/2010 15:22	61	72	-11	513-BKGDS1A	133	
1834	11/9/2010 15:23	73	72	1	513-BKGDS1A	133	
1835	11/9/2010 15:23	64	72	-8	513-BKGDS1A	133	
1836	11/9/2010 15:23	78	72	6	513-BKGDS1A	133	
1837	11/9/2010 15:23	90	72	18	513-BKGDS1A	133	
1838	11/9/2010 15:24	21	72	-51	513-BKGDS1A	133	
1839	11/9/2010 15:24	29	72	-43	513-BKGDS1A	133	
1840	11/9/2010 15:24	74	72	2	513-BKGDS1A	133	
1841	11/9/2010 15:24	94	72	22	513-BKGDS1A	133	
1842	11/9/2010 15:24	80	72	8	513-BKGDS1A	133	
1843	11/9/2010 15:24	67	72	-5	513-BKGDS1A	133	
1844	11/9/2010 15:24	58	72	-14	513-BKGDS1A	133	
1845	11/9/2010 15:25	22	72	-50	513-BKGDS1A	133	
1846	11/9/2010 15:25	36	72	-36	513-BKGDS1A	133	
1847	11/9/2010 15:25	49	72	-23	513-BKGDS1A	133	
1848	11/9/2010 15:25	93	72	21	513-BKGDS1A	133	
1849	11/9/2010 15:25	76	72	4	513-BKGDS1A	133	
1850	11/9/2010 15:26	65	72	-7	513-BKGDS1A	133	
1851	11/9/2010 15:26	24	72	-48	513-BKGDS1A	133	
1852	11/9/2010 15:26	59	72	-13	513-BKGDS1A	133	
1853	11/9/2010 15:26	65	72	-7	513-BKGDS1A	133	
1854	11/9/2010 15:27	98	72	26	513-BKGDS1A	133	
1855	11/9/2010 15:27	77	72	5	513-BKGDS1A	133	
1856	11/9/2010 15:27	72	72	0	513-BKGDS1A	133	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3 σ Investigation Level (cpm)	Comments
1857	11/9/2010 15:27	73	72	1	513-BKGDS1A	133	

Net Gamma cpm Min: -52

Summary Avg: -4

Max: 60

St Dev: 20

Readings > 3 σ investigation level are highlighted in **blue**

* Background ID correlates to instrument reference area background identification number

Gamma measurements > 3 σ investigation level are verified by 2360 beta measurements



TETRA TECH EC, INC.
 Hunters Point Shipyard
 San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

2350 Identification #: 513

Instrument/Probe Type: 2350-1 / 20DT06

Instrument Serial #: 228703

Probe Serial #: 091806C1

Calibration Due Date: 10/22/2011

Reference Area Background Identification #: 513-BKGD51A Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	11/02/2010 7:32	51
2	11/02/2010 7:34	90
3	11/02/2010 7:35	57
4	11/02/2010 7:36	77
5	11/02/2010 7:38	63
6	11/02/2010 7:39	84
7	11/02/2010 7:40	89
8	11/02/2010 7:41	141
9	11/02/2010 7:42	71
10	11/02/2010 7:44	46
11	11/02/2010 7:45	76
12	11/02/2010 7:46	65
13	11/02/2010 7:48	58
14	11/02/2010 7:49	65
15	11/02/2010 7:50	67
16	11/02/2010 7:51	81
17	11/02/2010 7:52	72
18	11/02/2010 7:54	56
19	11/02/2010 7:55	62
20	11/02/2010 7:56	65

Gamma Mean Background (cpm): 72

Standard Deviation: 20

Gamma 3 σ Investigation
Level (cpm): 133



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

2350 Identification #: 620

Instrument/Probe Type: 2350-1 / 20DT06

Instrument Serial #: 228694

Probe Serial #: 091806B

Calibration Due Date: 9/28/2012

Reference Area Background Identification #: 620-BKGDS1A Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	10/13/2011 15:12	168
2	10/13/2011 15:13	176
3	10/13/2011 15:14	169
4	10/13/2011 15:15	178
5	10/13/2011 15:16	162
6	10/13/2011 15:17	168
7	10/13/2011 15:19	198
8	10/13/2011 15:20	190
9	10/13/2011 15:21	169
10	10/13/2011 15:22	282
11	10/13/2011 15:23	192
12	10/13/2011 15:25	230
13	10/13/2011 15:26	196
14	10/13/2011 15:27	165
15	10/13/2011 15:28	291
16	10/13/2011 15:30	147
17	10/13/2011 15:31	166
18	10/13/2011 15:32	168
19	10/13/2011 15:33	290
20	10/13/2011 15:35	284

Gamma Mean Background (cpm): 199

Standard Deviation: 48

Gamma 3 σ Investigation
Level (cpm): 344



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Exposure Rate Measurements

Page 1

Site Area: 707 Survey Unit: 16 Class: 1 Area: 989.60 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Instrument Model:	Model 19	Reference Area Background Identification #:	421-BKGDS1
Instrument Serial Number:	167145	Reference Area Background Location:	Parcel D-1 Reference
Instrument Calibration Due Date:	3/5/2011	Exposure Rate Background (μR/hr):	5

Rdg #	Date	Exposure Rate (μR/hr)	Comments
1	11/22/2010	7	
2	11/22/2010	7	
3	11/22/2010	7	
4	11/22/2010	7	
5	11/22/2010	7	
6	11/22/2010	6	
7	11/22/2010	7	
8	11/22/2010	7	
9	11/22/2010	7	
10	11/22/2010	7	
11	11/22/2010	6	
12	11/22/2010	7	
13	11/22/2010	7	
14	11/22/2010	5	
15	11/22/2010	6	
16	11/22/2010	6	
17	11/22/2010	7	
18	11/22/2010	7	
19	11/22/2010	6	
20	11/22/2010	6	
21	12/1/2010	7	
22	12/1/2010	8	
23	12/1/2010	7	
24	12/1/2010	8	
25	12/1/2010	7	
26	12/1/2010	6	
27	12/1/2010	7	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Exposure Rate Measurements

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Rdg #	Date	Exposure Rate (μ R/hr)	Comments
28	12/1/2010	8	
29	12/1/2010	8	
30	12/1/2010	8	
31	12/1/2010	7	
32	12/1/2010	8	
33	1/17/2011	6	
34	1/17/2011	5	
35	1/17/2011	5	
36	1/17/2011	6	
37	1/17/2011	6	
38	1/17/2011	6	
39	1/17/2011	5	
40	1/17/2011	5	
41	1/17/2011	5	
42	2/15/2011	4	
43	2/15/2011	4	
44	2/15/2011	5	
45	3/4/2011	6	
46	3/4/2011	4	
47	3/4/2011	4	
48	3/4/2011	4	
49	3/4/2011	5	
50	3/4/2011	6	
51	3/4/2011	4	
52	3/4/2011	6	
53	3/4/2011	6	
54	3/4/2011	5	
55	3/4/2011	7	
56	3/4/2011	4	
57	3/4/2011	4	
58	3/4/2011	6	
59	3/4/2011	6	
60	3/4/2011	6	
61	3/4/2011	6	
62	3/4/2011	5	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Exposure Rate Measurements

Page 3

Rdg #	Date	Exposure Rate (μ R/hr)	Comments
63	3/4/2011	7	
64	3/4/2011	7	

Instrument Model: Model 19 Reference Area Background Identification #: 577-BKGDS1
Instrument Serial Number: 109970
Instrument Calibration Due Date: 2/24/2012 Reference Area Background Location: Parcel D-1 Reference
Exposure Rate Background (μ R/hr): 5

Rdg #	Date	Exposure Rate (μ R/hr)	Comments
65	5/6/2011	6	
66	5/6/2011	6	

Instrument Model: Model 19 Reference Area Background Identification #: 578-BKGDS1
Instrument Serial Number: 207505
Instrument Calibration Due Date: 2/24/2012 Reference Area Background Location: Parcel D-1 Reference
Exposure Rate Background (μ R/hr): 5

Rdg #	Date	Exposure Rate (μ R/hr)	Comments
67	6/7/2011	5	
68	6/7/2011	5	
69	6/7/2011	6	
70	6/7/2011	6	
71	6/7/2011	6	
72	6/7/2011	6	
73	6/7/2011	6	
74	6/7/2011	6	
75	6/7/2011	6	
76	6/7/2011	6	
77	6/7/2011	6	
78	6/7/2011	6	
79	6/7/2011	6	
80	6/7/2011	6	
81	6/7/2011	6	
82	6/7/2011	6	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Exposure Rate Measurements

Page 4

Rdg #	Date	Exposure Rate (μ R/hr)	Comments
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83	6/7/2011	6	
84	6/7/2011	6	
85	6/7/2011	6	
86	6/7/2011	6	

Instrument Model:	Model 19	Reference Area Background Identification #:	666-BKGDS1
Instrument Serial Number:	91499	Reference Area Background Location:	Parcel D-1 Reference
Instrument Calibration Due Date:	1/15/2013	Exposure Rate Background (μ R/hr):	6

Rdg #	Date	Exposure Rate (μ R/hr)	Comments
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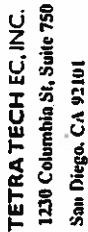
87	5/4/2012	6	
88	5/4/2012	6	
89	5/4/2012	6	
90	5/4/2012	6	
91	6/29/2012	5	

Instrument Model:	Model 19	Reference Area Background Identification #:	667-BKGDS1
Instrument Serial Number:	107447	Reference Area Background Location:	Parcel D-1 Reference
Instrument Calibration Due Date:	1/12/2013	Exposure Rate Background (μ R/hr):	6

Rdg #	Date	Exposure Rate (μ R/hr)	Comments
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92	8/7/2012	5	
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Exposure Rate Summary (μ R/hr)	Min: 4.00
	Avg: 6.03
	Max: 8.00
	St Dev: 1.00



Chain-of-Custody Record

[illegible]

Relinquished by: (signature)	Date	Received by: (signature)	Laboratory Instructions/Comments	Sampling Comments
<div>Company</div> <div> <div>Signature</div> <div>BRB</div> </div>	11-22-10	<div>Company</div> <div> <div>Signature</div> <div>NWT</div> </div>		BUILDING 707 TRIANGLE SURVEY UNIT 16 SYSTEMATIC 1-20
<div>Company</div> <div> <div>Signature</div> </div>	Time	<div>Company</div> <div> <div>Signature</div> </div>	COMPOSITE DESCRIPTION	
<div>Company</div> <div> <div>Signature</div> </div>	Time	<div>Company</div> <div> <div>Signature</div> </div>	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY) TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:	



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
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Chain-of-Custody Record

BFS 01729

Project Name		PO Number		N/A		G A M M A S P E C		S R 9 0		A L P H A		LABORATORY NAME		Project Information	
Radiological Building Survey		Project Number		3670-003								ONSITE - NWT		Section	
Project Location		Project Number		3670-003								LABORATORY ID			
Hunter's Point		Project Number		3670-003											
Project Chemist		Project Chemist Phone		949-756-7592											
LISA BIENKOWSKI		Project Chemist Phone		949-756-7592											
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	I	I	I	I	I	COMMENTS	LOCATION	DEPTH	QC
03707-S0016-F013-01	11/22/2010	1110	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
03707-S0016-F014-01	11/22/2010	1115	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
03707-S0016-F015-01	11/22/2010	1120	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
03707-S0016-F016-01	11/22/2010	1125	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
03707-S0016-F017-01	11/22/2010	1130	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
03707-S0016-F018-01	11/22/2010	1135	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
03707-S0016-F019-01	11/22/2010	1140	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
03707-S0016-F020-01	11/22/2010	1145	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				

Relinquished by: (signature)		Date	Received by: (signature)		LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS	
Tina Rolfe		11-22-10	E. Schmidt				BUILDING 707 TRIANGLE	
Company		Time	Company				SURVEY UNIT 16	
Relinquished by: (signature)		Date	Received by: (signature)		COMPOSITE DESCRIPTION		SYSTEMATIC 1-20	
Company		Time	Company					
Relinquished by: (signature)		Date	Received by: (signature)		SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)			
Company		Time	Company		TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:		PARCEL E	



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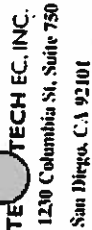
Chain-of-Custody Record

BFS01755

Bag 45

Project Name Radiological Building Survey		PO Number N/A		G A M A S P E C		A L P H A		LABORATORY NAME ONSITE - NWT		Project Information Section		
Project Location HUNTERS POINT		Project Number 3670-003		M A S P E C		A L P H A		LABORATORY ID				
Sampler Name A. Smith		Airbill Number N/A		M A S P E C		A L P H A						
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592		M A S P E C		A L P H A						
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	I	I	I	LOCATION	DEPTH START END	QC
03707-S0016-F021-01	12/1/2010	0920	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
03707-S0016-F022-01	12/1/2010	0925	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
03707-S0016-F023-01	12/1/2010	0930	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
03707-S0016-F024-01	12/1/2010	0935	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
03707-S0016-F025-01	12/1/2010	0940	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
03707-S0016-F026-01	12/1/2010	0945	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
03707-S0016-F027-01	12/1/2010	0950	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
03707-S0016-F028-01	12/1/2010	1000	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
03707-S0016-F029-01	12/1/2010	1005	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
03707-S0016-F030-01	12/1/2010	1010	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
03707-S0016-F031-01	12/1/2010	1015	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
03707-S0016-F032-01	12/1/2010	1020	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>			

Relinquished by: (signature) Anthony Smith		Date 12-1-10	Received by: (signature) NWT		LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS	
Company RSRS		Time 1415	Company NWT		COMPOSITE DESCRIPTION		B707 TELMELLE SU-16 BASED 21-32	
Relinquished by: (signature)		Date	Received by: (signature)		SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)			
Company		Time	Company		TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:			
Relinquished by: (signature)		Date	Received by: (signature)					
Company		Time	Company					



BFS 01825

Relinquished by: (signature) <i>[Signature]</i>	Date 01-17-11	Received by: (signature) <i>[Signature]</i>	LABORATORY INSTRUCTIONS/COMMENTS 2 samples per ID COMPOSITE DESCRIPTION SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY) TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:	SAMPLING COMMENTS B707 TRIMBLE PSS SU-16 BSP-LAMINATION 33-41
Company ASPS	Time 15:30	Company		
Relinquished by: (signature)	Date	Received by: (signature)		
Company	Time	Company		
Relinquished by: (signature)	Date	Received by: (signature)		
Company	Time	Company		



TECH EC, INC.
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Chain-of-Custody Record

BFS 01856

Bag 3

Project Name Radiological Building Survey		PO Number N/A		LABORATORY NAME ONSITE - RSRS		Project Information Section							
Project Location HUNTERS POINT		Project Number 3670-0003		LABORATORY ID									
Sampler Name R. Zahensky		Airbill Number N/A											
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592											
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	1	1	1	COMMENTS	LOCATION	DEPTH	QC
03707-S0016-F042-01	2/15/2011	1350	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0016-F043-01	2/15/2011	1355	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0016-F044-01	2/15/2011	1400	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				

Relinquished by: (signature) R. Zahensky	Date 2-15-11	Received by: (signature) [Signature]	LABORATORY INSTRUCTIONS/COMMENTS 2 samples per Jar	SAMPLING COMMENTS B407 TRIANGLE PSS SV-16 POST-REMEDIATION 42-44
Company RSRS	Time 16:00	Company RSRS	COMPOSITE DESCRIPTION Sample	
Relinquished by: (signature)	Date	Received by: (signature)		
Company	Time	Company		
Relinquished by: (signature)	Date	Received by: (signature)	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)	
Company	Time	Company	TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:	



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
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Chain-of-Custody Record

BFS 01901

Project Name: Radiological Building Survey		PO Number: N/A		Project Information Section									
Project Location: HUNTERS POINT		Project Number: 3670-0003		LABORATORY NAME: ONSITE - RSRs									
Sampler Name: J. Polke		Airbill Number: N/A		LABORATORY ID:									
Project Chemist: LISA BIENKOWSKI		Project Chemist Phone: 949-756-7592											
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	G A M A S P E C	S R 9 0	A L P H A	COMMENTS	LOCATION	DEPTH START END	QC
03707-S0016-F045-01	3/4/2011	1030	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0016-F046-01	3/4/2011	1035	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0016-F047-01	3/4/2011	1040	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0016-F048-01	3/4/2011	1045	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0016-F049-01	3/4/2011	1050	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0016-F050-01	3/4/2011	1055	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0016-F051-01	3/4/2011	1100	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0016-F052-01	3/4/2011	1105	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0016-F053-01	3/4/2011	1110	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0016-F054-01	3/4/2011	1115	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0016-F055-01	3/4/2011	1120	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0016-F056-01	3/4/2011	1125	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				

Relinquished by: (signature) J. Polke		Date: 3-4-11		Received by: (signature) RSRS	
Company: RSRS		Time: 1410		Company: RSRS	
Relinquished by: (signature)		Date:		Received by: (signature)	
Company:		Time:		Company:	
Relinquished by: (signature)		Date:		Received by: (signature)	
Company:		Time:		Company:	

LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS B707 TRIANGLE FSS SU-16 SYSTEMATIC 45-64	
COMPOSITE DESCRIPTION		SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY) TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:	



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 01902

Project Name Radiological Building Survey		PO Number N/A		Project Information Section									
Project Location HUNTERS POINT		Project Number 3670-0003		LABORATORY NAME ONSITE - RSRS									
Sampler Name J. Biele		Airbill Number N/A		LABORATORY ID									
Project Chemist LISA BIENKOWSKI		Project Chain of Custody Phone 949-756-7592											
SAMPLE ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	G A M M A S P E C	S R 9 0 A P H A	A L P H A	COMMENTS	LOCATION	DEPTH START END	QC
03707-S0016-F057-01	3/4/2011	1130	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0016-F058-01	3/4/2011	1135	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0016-F059-01	3/4/2011	1140	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0016-F060-01	3/4/2011	1145	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0016-F061-01	3/4/2011	1150	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0016-F062-01	3/4/2011	1240	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0016-F063-01	3/4/2011	1245	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0016-F064-01	3/4/2011	1250	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				

Relinquished by: (signature) Company RSRS	Date 3.4.11	Received by: (signature) Company RSRS	LABORATORY INSTRUCTIONS/COMMENTS	SAMPLING COMMENTS
Relinquished by: (signature) Company	Time 1410	Received by: (signature) Company	COMPOSITE DESCRIPTION	
Relinquished by: (signature) Company	Date	Received by: (signature) Company	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY) TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:	
Relinquished by: (signature) Company	Time	Received by: (signature) Company		



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 01959

Project Name Radiological Building Survey	PO Number N/A	G A M A S P E C		S R 9 0 A		A L P H A		LABORATORY NAME ONSITE - RSRS	Project Information Section
Project Location HUNTERS POINT	Project Number 3670-0003	T A T		I I I		COMMENTS		LABORATORY ID	
Sampler Name R. Zelenka	Airbill Number N/A	DATE	TIME	Containers	LEVEL	TYPE	LOCATION	SAMPLE ID	
Project Chemist LISA BIENKOWSKI	Project Chemist Phone 949-756-7592	5/6/2011	1005	1		S			
		5/6/2011	1010	1		S			

Relinquished by: (signature) R. Zelenka	Date 5.6.11	Received by: (signature) R. Zelenka	LABORATORY INSTRUCTIONS/COMMENTS	SAMPLING COMMENTS
Company RSRS	Time 15:55	Company RSRS	COMPOSITE DESCRIPTION	3707 TRIANGLE AREA SU-16 # 65-66 SEED POST - REMEDIATION
Relinquished by: (signature)	Date	Received by: (signature)	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)	
Company	Time	Company	TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:	
Relinquished by: (signature)	Date	Received by: (signature)		
Company	Time	Company		



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 01987

67-78 not provided

Project Name Radiological Building Survey		PO Number N/A		LABORATORY NAME ONSITE - RSRS		Project Information Section			
Project Location HUNTERS POINT		Project Number 3670-0003		LABORATORY ID					
Sampler Name J. Rolfe		Airfill Number N/A							
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592							
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	COMMENTS	LOCATION	SAMPLE ID
03707-S0016-F078-01	6/7/2011	1340	1		S				
03707-S0016-F080-01	6/7/2011	1345	1		S				
03707-S0016-F081-01	6/7/2011	1350	1		S				
03707-S0016-F082-01	6/7/2011	1355	1		S				
03707-S0016-F083-01	6/7/2011	1400	1		S				
03707-S0016-F084-01	6/7/2011	1405	1		S				
03707-S0016-F085-01	6/7/2011	1410	1		S				
03707-S0016-F086-01	6/7/2011	1415	1		S				

Relinquished by: (signature) J. Rolfe	Date 6-7-11	Received by: (signature) Eric Schmitt	LABORATORY INSTRUCTIONS/COMMENTS COMPOSITIONS/DETERMINATION SAMPLE CONDITION/INTEGRITY (FOR LABORATORY) TEMPERATURE SAMPLE CONDITION: COVER/SEAL	SAMPLING COMMENTS
Company RSRS	Time 15:26	Company PSPS		
Relinquished by: (signature)	Date	Received by: (signature)		
Company	Time	Company		
Relinquished by: (signature)	Date	Received by: (signature)		
Company	Time	Company		



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02408

Project Name Radiological Building Survey		PO Number N/A		G A S M R 1 M 0 1 A S P E C		A L P H A		Project Information Section	
Project Location HUNTERS POINT		Project Number 4044-0007						LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.	
Sampler Name R. Zabensky		Airbill Number N/A						LABORATORY ID	
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-758-7592							
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	COMMENTS	LOCATION	SAMPLE ID
03707-S0016-F087-01	5/4/2012	1300	1		S				
03707-S0016-F088-01	5/4/2012	1310	1		S				
03707-S0016-F089-01	5/4/2012	1320	1		S				

Relinquished by: (signature) R. Zabensky	Date 05-04-12	Received by: (signature) C. Tompkins
Company R5RB	Time 1437	Company COT
Relinquished by: (signature)	Date	Received by: (signature)
Company	Time	Company
Relinquished by: (signature)	Date	Received by: (signature)
Company	Time	Company

LABORATORY INFORMATION COMMENTS	CHAIN OF CUSTODY COMMENTS
COMMENTS DESCRIPTION	LABORATORY COMMENTS
SAMPLE INFORMATION CHAIN OF CUSTODY	LABORATORY COMMENTS
NUMBER OF SAMPLES CONDITION COMMENTS	LABORATORY COMMENTS



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02409

Project Name Radiological Building Survey	PO Number N/A	G A S M R L A 9 P S 0 H S A A		Project Information Section	
Project Location HUNTERS POINT	Project Number 4044-0007	T A T I 1 1 I 1 1		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.	
Sampler Name B Zehensky	Airbill Number N/A	TYPE S		LABORATORY ID [REDACTED]	
Project Chemist LISA BIENKOWSKI	Project Chemist Phone 949-758-7592	LEVEL		LOCATION	
SAMPLE ID 03707-S0016-F090-01	DATE 5/4/2012	TIME 1	CONTAINERS 1	COMMENTS	SAMPLE ID

Relinquished by: (signature) R. S. B.	Date 05-04-12	Received by: (signature) [Signature]	LABORATORY INSTRUCTIONS/COMMENTS	IS AMPLIFYING COMMENTS: NOT RELEVANT TO THIS SIO - No POST-REMEDIATION PROFESSOR'S COMMENTS ALL SITE ANALYSIS DONE
Company R.S.B.	Time 15:50	Company C&T	COMPOSITE DESCRIPTION	
Relinquished by: (signature)	Date	Received by: (signature)	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY) TEMPERATURE: SAMPLE CONDITION: COOLERS/SEALED	
Company	Time	Company		
Relinquished by: (signature)	Date	Received by: (signature)		
Company	Time	Company		



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

237561

BFS 02491

Project Name Radiological Site Survey		PO Number N/A		LABORATORY NAME ONSITE - Curtis & Templins, LTD.		Project Information Section	
Project Location HUNTERS POINT		Project Number 4044-0007		LABORATORY ID			
Sampler Name <i>R. Zahensky</i>		Airbill Number N/A					
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592					
SAMPLE_ID	DATE	TIME	CONTAINERS	LEVEL	TYPE	COMMENTS	SAMPLE ID
03707-S0016-F091-01	6/29/2012	1320	1		S	On-Site Gamma & Off-Site Total Sr	

Relinquished by: (signature) <i>R. Zahensky</i>		Date 6-29-12		Received by: (signature) <i>[Signature]</i>		LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS	
Company PSPS		Time 15:27		Company C&T				702756016	
Relinquished by: (signature)		Date		Received by: (signature)		COMPOSITE DESCRIPTION		Post remediation	
Company		Time		Company					
Relinquished by: (signature)		Date		Received by: (signature)		SAMPLING CONDITIONS/INSTRUCTIONS/COMMENTS			
Company		Time		Company		TEMPERATURE: SAMPLING LOCATION: COOLER/SEAL:			



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

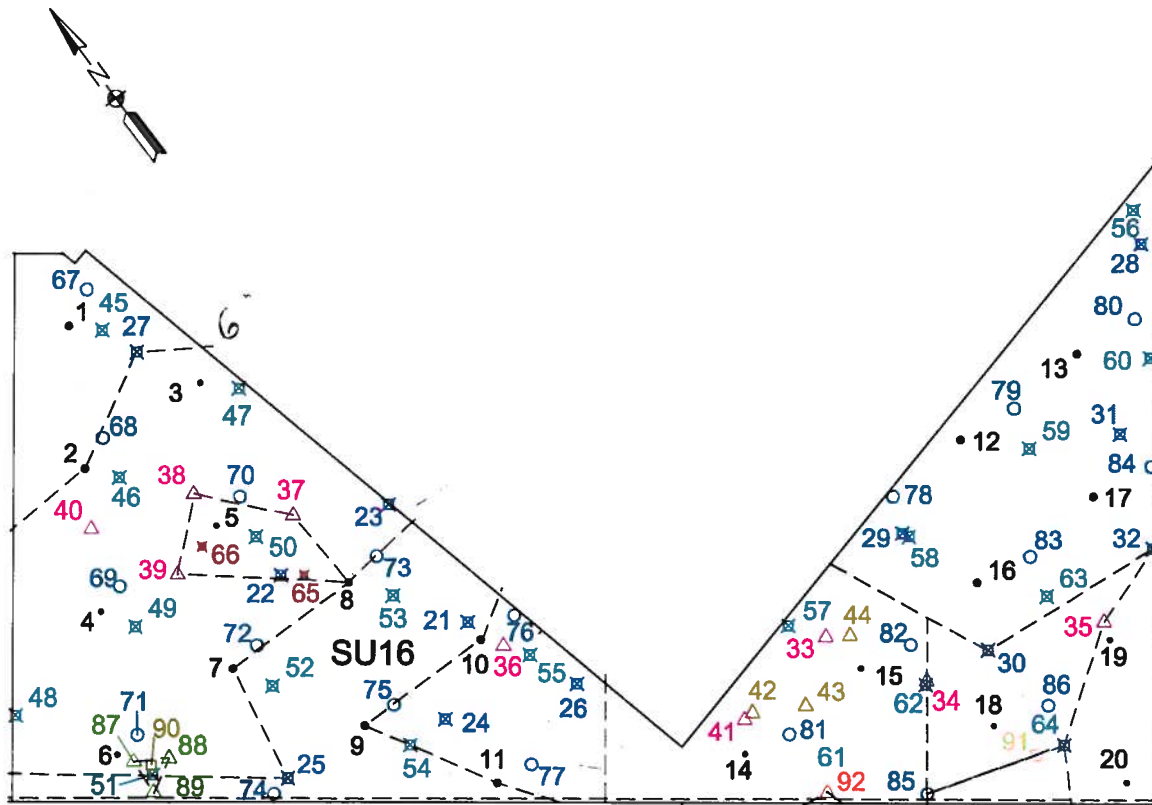
238581
BFS 02535

Project Name Radiological Site Survey		PO Number N/A		G A M A S P E C		S R P H A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD. LABORATORY ID		Project Information Section	
Project Location HUNTERS POINT		Project Number 4044-0007		A S P E C		H A					
Sampler Name J. Rolfe		Airbill Number N/A		S P E C							
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592		A S P E C							
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T	A	COMMENTS	LOCATION	SAMPLE ID	
03707-S0016-F082-01	8/7/2012	0945	1		S				for 707-SU22-SP45		

Relinquished by: (signature) Company RSPS		Date 8-7-12	Received by: (signature) Company C&T	
Relinquished by: (signature)		Time 14:14	Received by: (signature)	
Company		Date	Company	
Relinquished by: (signature)		Time	Received by: (signature)	
Company		Date	Company	
Relinquished by: (signature)		Time	Received by: (signature)	
Company		Date	Company	

INSTRUCTIONS/COMMENTS		SWAMPING/COMMENTS	
COMPOSING DISPOSITION		707-S0016-Characterization	
SAMPLE CONDITION/USE/STORAGE/NOTATION			
TEMPERATURE IS A CONDITION GOVERNANCE			

P:\CTO-03 CAD FILES\DWG FILES\707 SURVEY UNITS\707_SURVEY _10-15-12.DWG
PLOT/UPDATE: OCT 18 2012 13:21:05



LEGEND:

- 1 SYSTEMATIC 1 SAMPLES 1-20
- 21 BIASED SAMPLES 21-32
- △ 33 POST REMEDIATION 1 SAMPLES 33-41
- △ 42 POST REMEDIATION 2 SAMPLES 42-44
- 45 SYSTEMATIC 2 SAMPLES 45-64
- 65 Sr-90 REMEDIATION 1 SAMPLES 65-66
- 67 SYSTEMATIC 3 SAMPLES 67-86
- △ 87 Sr-90 REMEDIATION 2 SAMPLES 87-90
- △ 91 POST REMEDIATION 3 SAMPLES 91
- △ 92 CHARACTERIZATION SAMPLES 92
- PREVIOUS REMEDIATION

RECORD COPY

SCALE 1:30

HUNTERS POINT SHIPYARD
SAN FRANCISCO, CA
P.O. BOX 884836
SAN FRANCISCO, CA 94188

BUILDING 707
SURVEY UNIT 16



TETRA TECH EC, INC
1230 COLUMBIA STREET, SUITE 750
SAN DIEGO, CA 92101
TEL: (619) 234-8690 FAX: (619) 234-8591



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel E and Utility Corridor 3 (UC3) Storm Drain and Sanitary Sewer Removal Action

Report Date: November 22, 2010	EMAC – CTO 03
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Overview

The HPS Team continued field activities in the Building 707 Triangle Area, Scrap Yard, UC3, and Work Areas #16, #21 and #22. Details of the work activities performed are provided in the sections below.

Building 707 Triangle Area

- The HPS Team performed Class 1 survey activities in Survey Unit 9. A total of 40 gamma static measurements were logged. The maximum gamma static measurements logged were 90 cpm for the FIDLER and 8,423 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPS Team performed Class 1 survey activities in Survey Unit 16. A total of 40 gamma static measurements were logged. The maximum gamma static measurements logged were 109 cpm for the FIDLER and 8,502 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

Scrap Yard

- Following a review of analytical results from Survey Unit 5, staged asphalt debris from Grids 18, 20 and 22 were transferred to the recycling stockpile.

Parcel E/UC3 Storm Drain and Sanitary Sewer Removal Activities

- The HPS Team and the RASO concurred with backfilling Trench Unit No. 182.
- A variety of housekeeping activities were performed throughout Parcel E and UC3 by the HPS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report
- Task-specific Plans approval



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel E and Utility Corridor 3 (UC3) Storm Drain and Sanitary Sewer Removal Action

Report Date: December 1, 2010

EMAC – CTO 03

Overview

The HPS Team continued field activities in the Building 707 Triangle Area, Scrap Yard, UC3, and Work Areas #16 and #21. Details of the work activities performed are provided in the sections below.

Building 707 Triangle Area

- The HPS Team performed Class 1 survey activities in Survey Unit 3. A total of 18 biased gamma static measurements were logged. The maximum biased gamma static measurements logged were 83 cpm for the FIDLER and 7,705 cpm. In addition, 9 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPS Team performed Class 1 survey activities in Survey Unit 13. A total of 6 biased gamma static measurements were logged. The maximum biased gamma static measurements logged were 73 cpm for the FIDLER and 6,663 cpm. In addition, 3 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPS Team performed Class 1 survey activities in Survey Unit 14. A total of 14 biased gamma static measurements were logged. The maximum biased gamma static measurements logged were 167 cpm for the FIDLER and 6,981 cpm. In addition, 7 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPS Team performed Class 1 survey activities in Survey Unit 16. A total of 24 biased gamma static measurements were logged. The maximum biased gamma static measurements logged were 87 cpm for the FIDLER and 9,091 cpm. In addition, 12 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPS Team performed Class 1 survey activities in Survey Unit 18. A total of 16 biased gamma static measurements were logged. The maximum biased gamma static measurements logged were 212 cpm for the FIDLER and 8,560 cpm. In addition, 8 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

- The HPS Team performed Class 1 survey activities in Survey Unit 20. A total of 12 biased gamma static measurements were logged. The maximum biased gamma static measurements logged were 167 cpm for the FIDLER and 8,622 cpm. In addition, 6 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPS Team performed Class 1 survey activities in Survey Unit 21. A total of 30 biased gamma static measurements were logged. The maximum biased gamma static measurements logged were 99 cpm for the FIDLER and 8,382 cpm. In addition, 15 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

Scrap Yard

- The HPS Team performed Class 1 survey activities in Survey Unit 7. A characterization gamma static measurement was logged, and a soil sample was collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

Parcel E/UC3 Storm Drain and Sanitary Sewer Removal Activities

- Backfilling activities were initiated for Trench Unit No. 182 by the HPS Team.
- Backfilling activities were continued for Trench Units No. 174 and 183 by the HPS Team.
- A variety of housekeeping activities were performed throughout Parcel E and UC3 by the HPS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report
- Task-specific Plans approval



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel E and Utility Corridor 3 (UC3) Storm Drain and Sanitary Sewer Removal Action

Report Date: January 17, 2011	EMAC – CTO 03
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Overview

The HPS Team continued field activities in the Building 707 Triangle Area, UC3 and Work Areas #16 and #21. Details of the work activities performed are provided in the sections below.

Building 707 Triangle Area

- The HPS Team remediated approximately 90 cubic yards of soil from Survey Units 15, 16 and 17 and placed the material in LLRW bins BKRU025553G13, BKRU026385G14, GFLU001013G8, GFLU001059G15, GFLU001127G15, and GFLU001199G9 for disposal.
- The HPS Team performed Class 1 survey activities in Survey Unit 16. A total of 18 post-remediation gamma statics were logged. The maximum gamma static measurements logged were 73 cpm for the FIDLER and 7,830 cpm. In addition, nine post-remediation soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPS Team performed Class 1 survey activities in Survey Unit 17. A total of six post-remediation gamma statics were logged. The maximum gamma static measurements logged were 218 cpm for the FIDLER and 9,088 cpm. In addition, three post-remediation soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

Parcel E/UC3 Storm Drain and Sanitary Sewer Removal Activities

- Compaction testing was continued on recently backfilled areas of Trench Units No. 184 and 187. Based on the compaction testing results, backfill activities were continued for both trench survey units.
- A variety of housekeeping activities were performed throughout Parcel E and UC3 by the HPS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel E and Utility Corridor 3 (UC3) Storm Drain and Sanitary Sewer Removal Action

Report Date: February 15, 2011

EMAC – CTO 03

Overview

The HPS Team continued field activities in the Building 707 Triangle Area, the Scrap Yard, Parcel UC3, and Work Areas #16, #20 and #21. Details of the work activities performed are provided in the sections below.

Building 707 Triangle Area

- The HPS Team remediated approximately 60 cubic yards of soil from Survey Units 5, 9, and 14 and placed the material in LLRW bins BKRU025603G15, GFLU001039G16, GFLU001139G8 and GFLU001233G5 for disposal.
- The HPS Team performed Class 1 survey activities in Survey Unit 16. A total of six post-remediation gamma static measurements were logged. The maximum gamma static measurements logged were 56 cpm (FIDLER) and 4,468 cpm. In addition, three soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data
- The HPS Team performed Class 1 survey activities in Survey Unit 17. A total of four characterization gamma static measurements were logged. The maximum gamma static measurements logged were 208 cpm (FIDLER) and 5,370 cpm. In addition, two soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data
- The HPS Team provided the RASO with the off-site strontium analytical results for the post-remediation samples collected from Survey Units 3, 5, 7, 9, 13, 14, 15, 20, and 21. No activity above the release criteria was identified.
- The HPS Team provided the RASO with the off-site strontium analytical results for the biased “pothole” samples collected from Survey Unit 4. No activity above the release criteria was identified.
- The HPS Team provided the RASO with the off-site strontium analytical results for the post-remediation samples collected from Survey Unit 16. The laboratory analytical results identified ⁹⁰Sr activity above the release criteria at Sample Point 33 (18.5 pCi/g).
- The HPS Team provided the RASO with the on-site and off-site analytical results for the post-remediation samples collected from Survey Unit 17. The analytical results

identified the presence of ^{90}Sr activity above the release criteria at Sample Point 37 (15.1 pCi/g).

- Staged asphalt debris excavated from Survey Units 10, 11 and 18 was transferred to the off-site recycling stockpiles near Building 411.
- The HPS Team issued record drawings to identify locations for post-remediation sample collection in Survey Unit 13.

Scrap Yard

- Staged asphalt debris from Survey Unit 6 was transferred to the recycling stockpiles near Building 411.

Parcel E/UC3 Storm Drain and Sanitary Sewer Removal Activities

- The HPS Team continued post-paving asphalt cleaning activities and continued preparations for road striping and traffic sign installation.
- A variety of housekeeping activities were performed throughout Parcel E and UC3 by the HPS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel E and Utility Corridor 3 (UC3) Storm Drain and Sanitary Sewer Removal Action

Report Date: March 4, 2011	EMAC – CTO 03
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Overview

The HPS Team continued field activities in the Building 707 Triangle Area, Parcel UC3, and Work Areas #16 and #21. Details of the work activities performed are provided in the sections below.

Building 707 Triangle Area

- The HPS Team performed survey activities in Survey Unit 13. A total of 20 systematic gamma static measurements were logged. The maximum gamma static measurements logged were 99 cpm for the FIDLER and 5,755 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPS Team performed survey activities in Survey Unit 16. A total of 20 systematic gamma static measurements were logged. The maximum gamma static measurements logged were 82 cpm for the FIDLER and 6,963 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

Parcel E/UC3 Storm Drain and Sanitary Sewer Removal Activities

- The HPS Team continued post-paving asphalt cleaning activities and preparation for road striping and traffic sign installation.
- A variety of housekeeping activities were performed throughout Parcels E and UC3 by the HPS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel E and Utility Corridor 3 (UC3) Storm Drain and Sanitary Sewer Removal Action

Report Date: May 6, 2011	EMAC – CTO 03
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Overview

The HPS Team continued field activities in the Building 707 Triangle Area, Parcel UC3, and Work Areas #16 and #21. Details of the work activities performed are provided in the sections below.

Building 707 Triangle Area

- Approximately 7.5 cubic yards of soil was remediated from Survey Units 16 and 17 by the HPS Team and placed in LLRW bins BKRU012774G6, BKRU026398G13, and GFLU001221G8 for off-site disposal.
- The HPS Team logged a total of four post-remediation gamma static measurements in Survey Unit 16. The maximum measurements logged were 83 cpm (FIDLER) and 5,499 cpm. In addition, two soil samples were collected and submitted to the off-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPS Team logged four post-remediation gamma static measurements in Survey Unit 17. The maximum measurements logged were 209 cpm (FIDLER) and 8,228 cpm. In addition, two soil samples were collected and submitted to the off-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPS Team logged 42 investigative gamma static measurements in Survey Unit 19. The maximum measurements logged were 184 cpm (FIDLER) and 9,731 cpm. In addition, 21 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

Parcel E/UC3 Storm Drain and Sanitary Sewer Removal Activities

- A variety of housekeeping activities were performed throughout Parcels E and UC3 by the HPS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel E and Utility Corridor 3 (UC3) Storm Drain and Sanitary Sewer Removal Action

Report Date: June 7, 2011	EMAC – CTO 03
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Overview

The HPNS Team continued field activities in the Building 707 Triangle Area and Work Areas #16 and #21. Details of the work activities performed are provided in the sections below.

Building 707 Triangle Area

- The HPNS Team performed survey activities in Survey Unit 16. A total of 40 systematic gamma static measurements were logged. The maximum measurements logged were 95 cpm (FIDLER) and 7,256 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

Parcel E/UC3 Storm Drain and Sanitary Sewer Removal Activities

- A variety of housekeeping activities were performed throughout Parcels E and UC3 by the HPNS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: May 4, 2012

RMAC – CTO 07

Overview

The HPNS Team continued field activities for the Building 707 Triangle, Shacks 79 and 80, the 500 Series Area, and Work Areas #21 and #36. Details of the activities performed are provided in the sections below.

Building 707 Triangle

- Approximately 92 cubic yards of soil was remediated from Class 1 Survey Units 16 and 21 by the HPNS Team and placed in LLRW bins BFLU000163T17, ESUU100006, GFLU001028, GFLU001107, GFLU002057, and GFLU002171 for off-site disposal.
- The HPNS Team performed Class 1 survey activities as follows:
 - Asphalt Grid A7 – An investigational gamma static measurement was logged at 5,688 cpm. A total of 80 alpha/beta scan readings and an additional investigational static measurement also were logged. The preliminary data does not indicate the presence of alpha/beta activity above the release limits. In addition, one swipe sample was collected and submitted to the on-site laboratory for analysis.
 - Survey Unit 16 – Three characterization and one post-remediation gamma static measurements were logged with maximum measurements of 192 cpm (FIDLER) and 5,960 cpm. In addition, four soil samples were collected and submitted to the off-site laboratory for total strontium analysis.
- The RSO is in the process of reviewing the survey data for Asphalt Grid A7 and Survey Unit 16.

Shacks 79 and 80

- The HPNS Team provided the RASO with on-site analytical results for the replacement systematic sample collected from Class 1 Survey Unit 2. Because no activity above the release criteria was identified, the entire systematic sample set will be submitted to the off-site laboratory for analysis.

500 Series Area

- Towed array gamma scan survey activities were resumed over sections of Class 2 Survey Unit 23.

- The HPNS Team provided the RASO with on-site analytical results for the additional characterization samples collected from Class 1 Survey Units 5, 6, and 15; no activity above the release criteria was identified.
- The HPNS Team provided the RASO with on-site analytical results for the replacement systematic sample collected from Class 1 Survey Unit 17. Because no activity above the release criteria was identified, the systematic samples will be submitted to the off-site laboratory for analysis.
- The HPNS Team issued drawings to identify locations for systematic sample collection in Class 1 Survey Unit 15 and record drawings to identify the post-remediation sample collection locations in Class 1 Survey Units 16 and 18.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- The HPNS Team excavated approximately 360 cubic yards of soil from Work Area #36 and transferred the material to RSY4 for processing. Excavation activities were performed for the following trench segments:
 - 07-507-38-3V 34 linear feet completed
 - 07-507-38-4B 7 linear feet completed
 - 07-508-38-4C 44 linear feet completed
 - 07-508-38-4D 61 linear feet completed
 - 07-508-38-4E 59 linear feet completed
 - 07-508-38-8A 10 linear feet completed
 - 07-E36-38-3V 35 linear feet completed
 - 07-E36-38-4B 15 linear feet completed
 - 07-E36-38-4C 15 linear feet completed
 - 07-E36-38-4F 20 linear feet completed
 - 07-E36-38-4M 3 linear feet completed
- A total of 293 linear feet of trench (including excavated soil, manholes, and pipes) identified on the design drawings and 10 linear feet not identified on the design drawings were completed by the HPNS Team.
- Manholes MH1239, MH1240, MH1241, MH1242, and MH1271, and pipe excavated from trench segments 07-507-38-8A and 07-E36-38-4F were placed on plastic pending further activities.
- Approximately 2.5 cubic yards of soil was remediated from Trench Unit No. 249 (trench segment 07-E36-38-3M) by the HPNS Team and placed in LLRW bin GFLU002139 for off-site disposal.
- Three post-remediation samples were collected from Trench Unit No. 249 by the HPNS Team and submitted to the on-site laboratory for analysis.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: June 29, 2012

RMAC – CTO 07

Overview

The HPNS Team continued field activities for Building 500, the Building 506 and 531 Sites, the Building 707 Triangle, the 500 Series Area, and Work Areas #21 and #36. Details of the activities performed are provided in the sections below.

Building 707 Triangle

- A total of 15 cubic yards were remediated from Class 1 Survey Units 16, 22, and 23 by the HPNS Team and placed in LLRW bins BKRU026000T12 and MHFU001109T18 for off-site disposal.
- The HPNS Team performed additional survey activities around the previously remediated strontium spill area (Class 1 Survey Units 16, 21, 22, and 23). Two previous pothole excavations were remediated and 12 post-remediation gamma static readings logged. The maximum measurements recorded were 216 cpm (FIDLER) and 5,456 cpm. In addition, six soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPNS Team performed Class 1 survey activities in Survey Units 16, 22, and 23. A total of 6 post-remediation gamma static readings logged with the maximum measurements recorded at 203 cpm (FIDLER) and 3,722 cpm. In addition, 3 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

500 Series Area

- The HPNS Team provided the RASO with revised on-site analytical results for the biased and systematic samples collected from Class 1 Survey Unit 22. Characterization and remediation will continue to be performed due to the presence of additional ^{137}Cs contamination as follows:
 - Sample Point 11 (07500SA-S0022-F011-01) with ^{137}Cs at 0.1628 pCi/g
 - Sample Point 38 (07500SA-S0022-F038-01) with ^{137}Cs at 0.1207 pCi/g
- The HPNS Team provided the RASO with revised on-site analytical results for the biased and systematic samples collected from Class 1 Survey Unit 23. Characterization and remediation will continue to be performed due to the presence of additional ^{137}Cs contamination as follows:

- Sample Point 14 (07500SA-S0023-F014-01) with ^{137}Cs at 0.1215 pCi/g
- Sample Point 16 (07500SA-S0023-F016-01) with ^{137}Cs at 0.1338 pCi/g
- Sample Point 35 (07500SA-S0023-F035-01) with ^{137}Cs at 0.1146 pCi/g
- Sample Point 40 (07500SA-S0023-F040-01) with ^{137}Cs at 0.1210 pCi/g
- The HPNS Team provided the RASO with revised on-site analytical results for the biased and systematic samples collected from Class 1 Survey Unit 24. Characterization and remediation will continue to be performed due to the presence of additional ^{137}Cs contamination as follows:
 - Sample Point 7 (07500SA-S0024-F007-01) with ^{137}Cs at 0.1434 pCi/g
 - Sample Point 11 (07500SA-S0024-F011-01) with ^{137}Cs at 0.1412 pCi/g
- The HPNS Team provided the RASO with total strontium analytical results for the elevated ^{137}Cs samples collected from Class 1 Survey Unit 20; no further contamination was identified.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- The HPNS Team provided the RASO with on-site analytical results of the systematic samples collected from Trench Unit No. 308 (associated with the Building 506 and 531 Sites). Because no activity above the release criteria was identified, the systematic samples will be submitted to the off-site laboratory for analysis.
- The HPNS Team issued drawings to identify locations for systematic sample collection in Trench Unit No. 311 (associated with Building 500) and an updated Parcel E Trench Survey Unit Key Plan.
- Swale installation activities along Hussey Street were continued by the HPNS Team.
- A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel E and Building 500 Series Removal Action

Report Date: August 7, 2012	RMAC – CTO 07
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Overview

The HPNS Team continued field activities for the Building 506 Site, the Building 707 Triangle, the 500 Series Area, and Work Areas #21 and #36. Details of the activities performed are provided in the sections below.

Building 506 Site

- The HPNS Team continued activities on the containment vault concrete floor and walls associated with the former underground radiological waste storage tank in Survey Unit 3. The upper five feet of the containment vault concrete walls were removed and placed on plastic pending radiological survey activities.
- Approximately 10 cubic yards of soil generated during excavation of the outer walls of the containment vault were transferred by the HPNS Team to LLRW bin AWIU000216T1 for off-site disposal.

Building 707 Triangle

- The HPNS Team performed Class 1 survey activities as follows:
 - Survey Unit 16 – A total of two characterization gamma static measurements were logged at 226 cpm (FIDLER) and 6,811 cpm. In addition, a soil sample was collected and submitted to the on-site laboratory for analysis.
 - Survey Unit 22 – A total of twenty characterization gamma static measurements were logged with the maximum measurements recorded at 231 cpm (FIDLER) and 5,689 cpm. In addition, ten soil samples were collected and submitted to the on-site laboratory for analysis.
- The RSO is in the process of reviewing survey data for Class 1 Survey Units 16 and 22.
- The HPNS Team issued drawings to identify characterization sample collection locations in Class 1 Survey Units 16 and 22.

500 Series Area

- The HPNS Team issued drawings to identify remediation locations in Class 1 Survey Units 22 through 24.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- Grinding and recycling activities were performed by Kroeker and the HPNS Team on approximately 893 tons of asphalt near Building 411.
- A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report

Area	Survey Unit	Sample Point	Sample Type	Sample ID	Date Collected	COC Radiological Technician
707	16	54	Systematic	03707-S0016-F054-01	04-Mar-11	Jeff Rolfe
707	16	55	Systematic	03707-S0016-F055-01	04-Mar-11	Jeff Rolfe
707	16	56	Systematic	03707-S0016-F056-01	04-Mar-11	Jeff Rolfe
707	16	57	Systematic	03707-S0016-F057-01	04-Mar-11	Jeff Rolfe
707	16	58	Systematic	03707-S0016-F058-01	04-Mar-11	Jeff Rolfe
707	16	59	Systematic	03707-S0016-F059-01	04-Mar-11	Jeff Rolfe
707	16	60	Systematic	03707-S0016-F060-01	04-Mar-11	Jeff Rolfe
707	16	61	Systematic	03707-S0016-F061-01	04-Mar-11	Jeff Rolfe
707	16	62	Systematic	03707-S0016-F062-01	04-Mar-11	Jeff Rolfe
707	16	63	Systematic	03707-S0016-F063-01	04-Mar-11	Jeff Rolfe
707	16	64	Systematic	03707-S0016-F064-01	04-Mar-11	Jeff Rolfe
707	16	65	Sr90 Remediation	03707-S0016-F065-01	06-May-11	Rick Zahensky
707	16	66	Sr90 Remediation	03707-S0016-F066-01	06-May-11	Rick Zahensky
707	16	67	Systematic	03707-S0016-F067-01	07-Jun-11	Jeff Rolfe
707	16	68	Systematic	03707-S0016-F068-01	07-Jun-11	Jeff Rolfe
707	16	69	Systematic	03707-S0016-F069-01	07-Jun-11	Jeff Rolfe
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707	16	74	Systematic	03707-S0016-F074-01	07-Jun-11	Jeff Rolfe
707	16	75	Systematic	03707-S0016-F075-01	07-Jun-11	Jeff Rolfe
707	16	76	Systematic	03707-S0016-F076-01	07-Jun-11	Jeff Rolfe
707	16	77	Systematic	03707-S0016-F077-01	07-Jun-11	Jeff Rolfe
707	16	78	Systematic	03707-S0016-F078-01	07-Jun-11	Jeff Rolfe
707	16	79	Systematic	03707-S0016-F079-01	07-Jun-11	Jeff Rolfe
707	16	80	Systematic	03707-S0016-F080-01	07-Jun-11	Jeff Rolfe
707	16	81	Systematic	03707-S0016-F081-01	07-Jun-11	Jeff Rolfe
707	16	82	Systematic	03707-S0016-F082-01	07-Jun-11	Jeff Rolfe
707	16	83	Systematic	03707-S0016-F083-01	07-Jun-11	Jeff Rolfe
707	16	84	Systematic	03707-S0016-F084-01	07-Jun-11	Jeff Rolfe
707	16	85	Systematic	03707-S0016-F085-01	07-Jun-11	Jeff Rolfe
707	16	86	Systematic	03707-S0016-F086-01	07-Jun-11	Jeff Rolfe
707	16	87	Sr90 Remediation	03707-S0016-F087-01	04-May-12	Rick Zahensky
707	16	88	Sr90 Remediation	03707-S0016-F088-01	04-May-12	Rick Zahensky
707	16	89	Sr90 Remediation	03707-S0016-F089-01	04-May-12	Rick Zahensky
707	16	90	Sr90 Remediation	03707-S0016-F090-01	04-May-12	Rick Zahensky
707	16	91	Post-Remediation	03707-S0016-F091-01	29-Jun-12	Rick Zahensky
707	16	92	Characterization	03707-S0016-F092-01	07-Aug-12	Jeff Rolfe

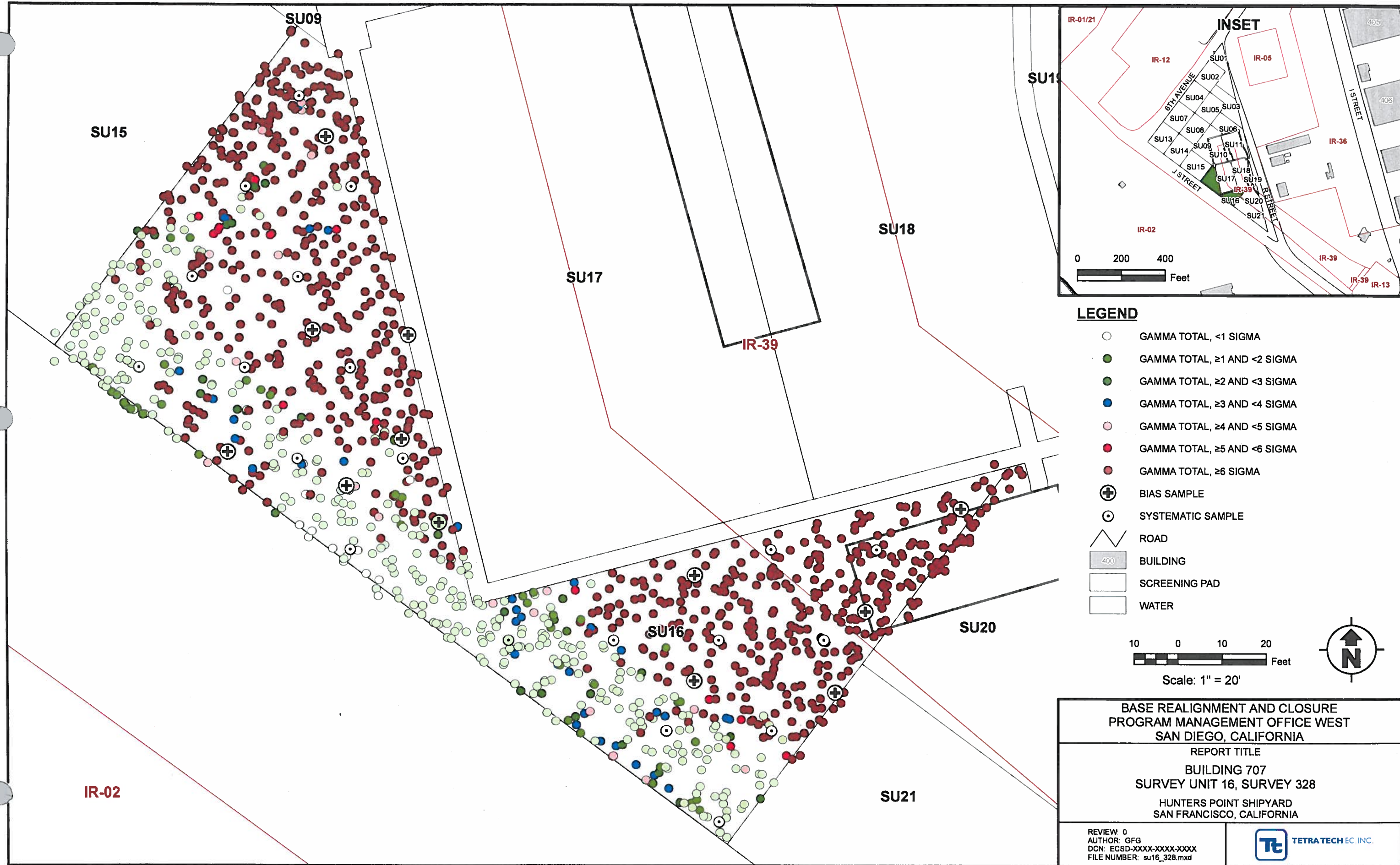
On-Site Laboratory (pCi/g)

K-40	Ra-226	Cs-137	Bi-214	Pb-214
6.448	0.1772	-0.000337	0.3066	0.1182
7.27	0.3256	0.001196	0.2063	0.2104
6.321	0.1429	0.003227	0.2811	0.2283
4.77	0.253	0.002548	0.4943	0.3934
5.407	0.1624	0.003164	0.1221	0.1433
7.281	0.452	-0.003997	0.1471	0.2353
6.152	0.002317	0	0.184	0.3286
7.212	0.1016	-0.0006468	0.2156	0.2407
7.198	0.4266	-0.001584	0.2997	0.3297
5.891	0.5774	0	0.1825	0.2358
5.84	0.2994	-0.005774	0.1207	0.1984
5.497	0.5569	-0.002965	0.2645	0.2208
3.585	0.2724	-0.006602	0.1009	0.2097
5.921	0.4072	-0.0003025	0.1929	0.2087
3.912	0.2403	0.0006924	0.1092	0.05742
0.5989	0.189	0	0.03181	0.0576
1.052	0.3574	0.003927	0.05744	0.0009318
0.6922	-0.08615	0.00003038	0.02316	0.005738
1.028	0.138	0.003106	0.03219	0.005892
0.4487	0.1769	0.00115	0.01864	0.02665
0.73	0.2528	0	-0.05055	0.001416
2.085	0	0	0.06933	0.01033
1.468	0.1912	-0.001889	-0.02702	0.1142
1.561	0.06709	0	0.0632	0.0918
1.395	0.09918	-0.004538	0.06217	0.06162
5.032	0.6889	-0.008213	0.02611	0.2336
2.903	0.2683	-0.008008	0.2192	0.07929
2.539	0	-0.004677	0.05441	0.1153
2.951	0.2242	-0.003493	0.07767	0.1788
5.209	0.5809	-0.005378	0.01803	0.1538
4.85	0.1707	0.00324	0.07472	0.2392
1.112	0.2955	0	0.03228	0.02751
0.8809	0.1604	-0.002972	0.03894	0

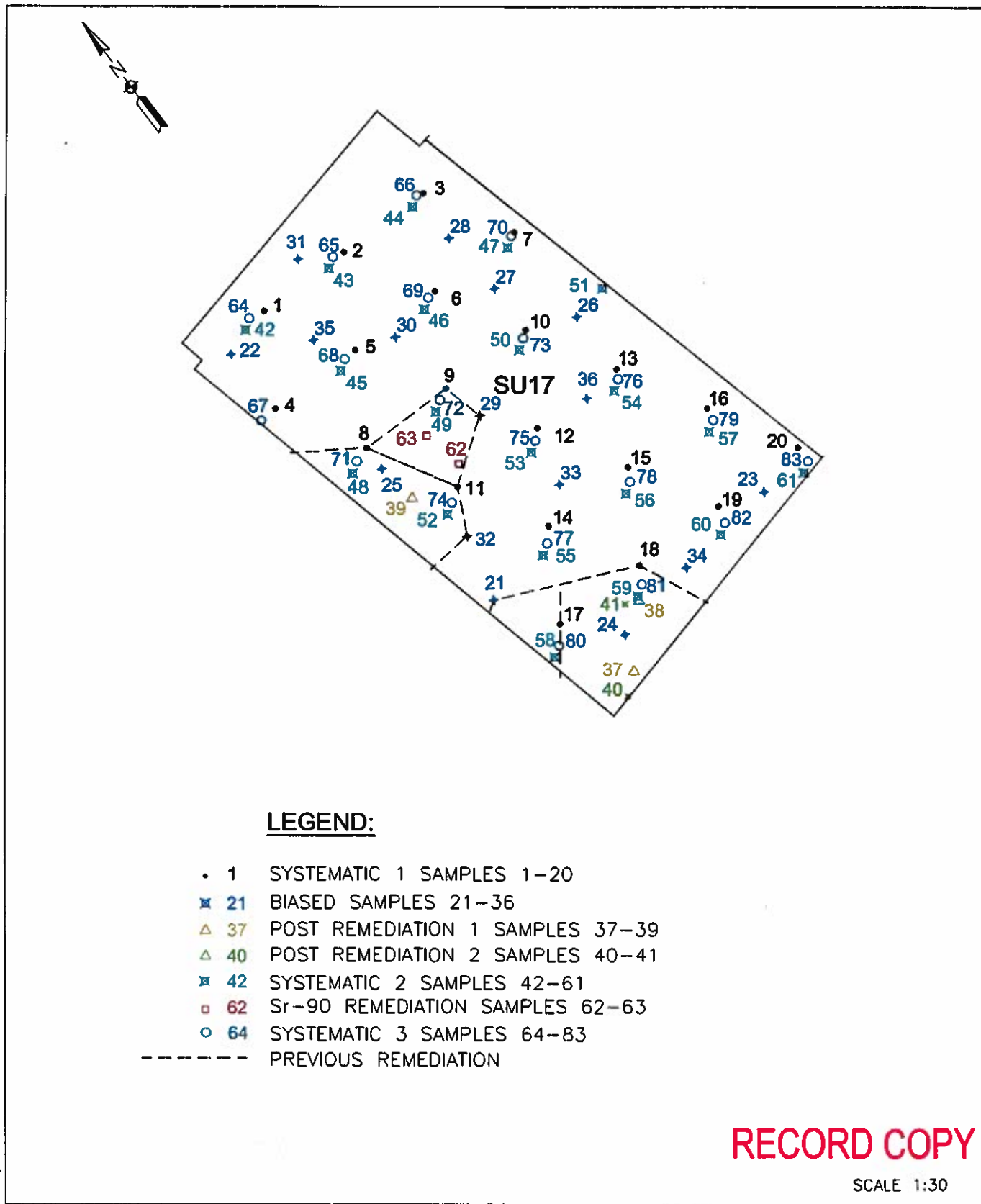
Off-Site Laboratory (pCi/g)

K-40	Ra-226	Cs-137	Bi-214	Pb-214
2.49	0.466	-0.0151	0.466	0.286
4.54	0.0812	-0.0374	0.0812	0.28
7.83	0.34	-0.00112	0.34	0.308
5.1	0.445	0.00511	0.445	0.3
5.86	0.314	-0.00959	0.314	0.378
4.34	0.199	-0.0194	0.199	0.327
4.37	0.356	-0.0329	0.356	0.381
7.55	0.426	0.000311	0.426	0.348
7.46	0.324	0.0292	0.324	0.332
5	0.0686	-0.0229	0.0686	0.354
4.2	0.415	0.0198	0.415	0.358
4.31	0.28	0.0264	0.28	0.341
3.19	0.175	-0.0124	0.175	0.365
3.72	0.163	-0.00933	0.163	0.43
4.46	0.226	-0.00835	0.226	0.229
1.59	0.177	0.00898	0.177	0.178
0.479	0.224	0	0.224	0.0311
0.815	0.0254	0.000167	0.0254	0.0309
1.99	0.0509	0.00637	0.0509	0.0294
0.786	0.0433	0.0168	0.0433	0.0852
1.68	0.0677	0.00883	0.0677	0.194
2.08	0.0856	-0.0078	0.0856	0.125
2.55	0.194	0.0183	0.194	0.0571
1.84	0.135	0.000445	0.135	0.183
1.7	0.219	-0.0228	0.219	0.215
2.78	0.162	-0.000692	0.162	0.283
2.1	0.148	-0.0319	0.148	0.213
3.15	0.175	-0.0088	0.175	0.266
3.86	0.585	-0.00758	0.585	0.705
3.03	0.248	0.0062	0.248	0.25
4.22	0.35	0.0131	0.35	0.345

Highlighted Activities: Ra-226 ≥ 1.633 (On-site) & 1.375 (Off-site) ; Cs-137 ≥ 0.113 ; Bi-214 ≥ 1.485 ; Pb-214 ≥ 1.485 (pCi/g)



P:\CTO-03 CAD FILES\DWG FILES\707 SURVEY UNITS\707_SURVEY _10-15-12.DWG
 PLOT/UPDATE: OCT 18 2012 13:26:08



HUNTERS POINT SHIPYARD
 SAN FRANCISCO, CA
 P.O. BOX 884836
 SAN FRANCISCO, CA 94188

BUILDING 707
SURVEY UNIT 17



TETRA TECH EC, INC
 1230 COLUMBIA STREET, SUITE 750
 SAN DIEGO, CA 92101
 TEL: (619) 234-8690 FAX: (619) 234-8591



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

2350 Identification #: 518

Instrument/Probe Type: 2350-1 / 44-10

Instrument Serial #: 126182

Probe Serial #: 230161

Calibration Due Date: 11/17/2011

Reference Area Background Identification #: 518-BKGDS18 Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	03/01/2011 10:24	5734
2	03/01/2011 10:26	6197
3	03/01/2011 10:27	5923
4	03/01/2011 10:28	5458
5	03/01/2011 10:29	6885
6	03/01/2011 10:30	5930
7	03/01/2011 10:31	5459
8	03/01/2011 10:32	5899
9	03/01/2011 10:34	5865
10	03/01/2011 10:35	5347
11	03/01/2011 10:36	5470
12	03/01/2011 10:37	5852
13	03/01/2011 10:38	6022
14	03/01/2011 10:40	6222
15	03/01/2011 10:41	5742
16	03/01/2011 10:42	5119
17	03/01/2011 10:43	5970
18	03/01/2011 10:44	5959
19	03/01/2011 10:45	6120
20	03/01/2011 10:46	6291

Gamma Mean Background (cpm): 5873

Standard Deviation: 392

**Gamma 3 σ Investigation
Level (cpm): 7049**



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1	11/19/2010 7:36	6906	5817	1089	479-BKGDS1A	7378	
2	11/19/2010 7:37	5775	5817	-42	479-BKGDS1A	7378	
3	11/19/2010 7:39	5294	5817	-523	479-BKGDS1A	7378	
4	11/19/2010 7:40	6744	5817	927	479-BKGDS1A	7378	
5	11/19/2010 7:42	7548	5817	1731	479-BKGDS1A	7378	
6	11/19/2010 7:43	5983	5817	166	479-BKGDS1A	7378	
7	11/19/2010 7:44	5717	5817	-100	479-BKGDS1A	7378	
8	11/19/2010 7:45	7440	5817	1623	479-BKGDS1A	7378	
9	11/19/2010 7:47	8010	5817	2193	479-BKGDS1A	7378	
10	11/19/2010 7:48	6838	5817	1021	479-BKGDS1A	7378	
11	11/19/2010 7:50	7831	5817	2014	479-BKGDS1A	7378	
12	11/19/2010 7:51	6979	5817	1162	479-BKGDS1A	7378	
13	11/19/2010 7:52	7332	5817	1515	479-BKGDS1A	7378	
14	11/19/2010 7:54	7899	5817	2082	479-BKGDS1A	7378	
15	11/19/2010 7:55	6929	5817	1112	479-BKGDS1A	7378	
16	11/19/2010 7:56	4743	5817	-1074	479-BKGDS1A	7378	
17	11/19/2010 7:58	7612	5817	1795	479-BKGDS1A	7378	
18	11/19/2010 7:59	6603	5817	786	479-BKGDS1A	7378	
19	11/19/2010 8:00	5740	5817	-77	479-BKGDS1A	7378	
20	11/19/2010 8:01	7859	5817	2042	479-BKGDS1A	7378	
21	11/30/2010 10:14	6537	5817	720	479-BKGDS1A	7378	
22	11/30/2010 10:15	8550	5817	2733	479-BKGDS1A	7378	
23	11/30/2010 10:16	8490	5817	2673	479-BKGDS1A	7378	
24	11/30/2010 10:18	8384	5817	2567	479-BKGDS1A	7378	
25	11/30/2010 10:19	9743	5817	3926	479-BKGDS1A	7378	
26	11/30/2010 10:20	7123	5817	1306	479-BKGDS1A	7378	
27	11/30/2010 10:22	6675	5817	858	479-BKGDS1A	7378	
28	11/30/2010 10:23	7298	5817	1481	479-BKGDS1A	7378	
29	11/30/2010 10:24	7513	5817	1696	479-BKGDS1A	7378	
30	11/30/2010 10:25	8396	5817	2579	479-BKGDS1A	7378	
31	11/30/2010 10:27	8138	5817	2321	479-BKGDS1A	7378	
32	11/30/2010 10:28	7563	5817	1746	479-BKGDS1A	7378	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
33	11/30/2010 10:29	9326	5817	3509	479-BKGDS1A	7378	
34	11/30/2010 10:30	8329	5817	2512	479-BKGDS1A	7378	
35	11/30/2010 10:32	7942	5817	2125	479-BKGDS1A	7378	
36	11/30/2010 10:33	8117	5817	2300	479-BKGDS1A	7378	
37	1/17/2011 11:29	9088	5817	3271	479-BKGDS1A	7378	
38	1/17/2011 11:35	5862	5817	45	479-BKGDS1A	7378	
39	1/17/2011 11:39	8378	5817	2561	479-BKGDS1A	7378	
40	2/15/2011 13:34	5370	5817	-447	479-BKGDS1A	7378	
41	2/15/2011 13:36	4533	5817	-1284	479-BKGDS1A	7378	
42	3/8/2011 11:04	7043	5817	1226	479-BKGDS1A	7378	
43	3/8/2011 11:06	6535	5817	718	479-BKGDS1A	7378	
44	3/8/2011 11:07	5131	5817	-686	479-BKGDS1A	7378	
45	3/8/2011 11:08	7033	5817	1216	479-BKGDS1A	7378	
46	3/8/2011 11:10	6310	5817	493	479-BKGDS1A	7378	
47	3/8/2011 11:11	5874	5817	57	479-BKGDS1A	7378	
48	3/8/2011 11:12	6395	5817	578	479-BKGDS1A	7378	
49	3/8/2011 11:13	7675	5817	1858	479-BKGDS1A	7378	
50	3/8/2011 11:15	6672	5817	855	479-BKGDS1A	7378	
51	3/8/2011 11:16	5932	5817	115	479-BKGDS1A	7378	
52	3/8/2011 11:17	7433	5817	1616	479-BKGDS1A	7378	
53	3/8/2011 11:19	7312	5817	1495	479-BKGDS1A	7378	
54	3/8/2011 11:20	6416	5817	599	479-BKGDS1A	7378	
55	3/8/2011 11:21	7453	5817	1636	479-BKGDS1A	7378	
56	3/8/2011 11:22	4662	5817	-1155	479-BKGDS1A	7378	
57	3/8/2011 11:24	4473	5817	-1344	479-BKGDS1A	7378	
58	3/8/2011 11:25	7270	5817	1453	479-BKGDS1A	7378	
59	3/8/2011 11:26	4503	5817	-1314	479-BKGDS1A	7378	
60	3/8/2011 11:28	7460	5817	1643	479-BKGDS1A	7378	
61	3/8/2011 11:29	7269	5817	1452	479-BKGDS1A	7378	
62	5/6/2011 11:11	5440	5817	-377	479-BKGDS1A	7378	
63	5/6/2011 11:12	8228	5817	2411	479-BKGDS1A	7378	
64	6/8/2011 11:02	6993	5873	1120	518-BKGDS1B	7049	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
65	6/8/2011 11:03	5038	5873	-835	518-BKGDS1B	7049	
66	6/8/2011 11:04	4680	5873	-1193	518-BKGDS1B	7049	
67	6/8/2011 11:06	6890	5873	1017	518-BKGDS1B	7049	
68	6/8/2011 11:07	5865	5873	-8	518-BKGDS1B	7049	
69	6/8/2011 11:08	6848	5873	975	518-BKGDS1B	7049	
70	6/8/2011 11:09	5563	5873	-310	518-BKGDS1B	7049	
71	6/8/2011 11:10	6237	5873	364	518-BKGDS1B	7049	
72	6/8/2011 11:11	6179	5873	306	518-BKGDS1B	7049	
73	6/8/2011 11:14	6310	5873	437	518-BKGDS1B	7049	
74	6/8/2011 11:15	6600	5873	727	518-BKGDS1B	7049	
75	6/8/2011 11:17	6518	5873	645	518-BKGDS1B	7049	
76	6/8/2011 11:18	6446	5873	573	518-BKGDS1B	7049	
77	6/8/2011 11:19	6463	5873	590	518-BKGDS1B	7049	
78	6/8/2011 11:20	6532	5873	659	518-BKGDS1B	7049	
79	6/8/2011 11:21	6498	5873	625	518-BKGDS1B	7049	
80	6/8/2011 11:22	4985	5873	-888	518-BKGDS1B	7049	
81	6/8/2011 11:23	5868	5873	-5	518-BKGDS1B	7049	
82	6/8/2011 11:24	5098	5873	-775	518-BKGDS1B	7049	
83	6/8/2011 11:26	5946	5873	73	518-BKGDS1B	7049	

Net Gamma cpm Min: -1344

Summary Avg: 931

Max: 3926

St Dev: 1188

Readings > 3σ investigation level are highlighted in blue

* Background ID correlates to instrument reference area background identification number

Gamma measurements > 3σ investigation level are verified by 2360 beta measurements



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

2350 Identification #: 479

Instrument/Probe Type: 2350-1 / 44-10

Instrument Serial #: 129430

Probe Serial #: 012176

Calibration Due Date: 5/12/2011

Reference Area Background Identification #: 479-BKGD51A Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	07/29/2010 10:01	5432
2	07/29/2010 10:05	6064
3	07/29/2010 10:06	5667
4	07/29/2010 10:07	5647
5	07/29/2010 10:08	6956
6	07/29/2010 10:09	6120
7	07/29/2010 10:11	5199
8	07/29/2010 10:12	5083
9	07/29/2010 10:14	5880
10	07/29/2010 10:15	5567
11	07/29/2010 10:17	6268
12	07/29/2010 10:18	5786
13	07/29/2010 10:19	5405
14	07/29/2010 10:21	5984
15	07/29/2010 10:22	7018
16	07/29/2010 10:23	5521
17	07/29/2010 10:24	5872
18	07/29/2010 10:26	5464
19	07/29/2010 10:27	6157
20	07/29/2010 10:28	5241

Gamma Mean Background (cpm): 5817

Standard Deviation: 520

Gamma 3σ Investigation
Level (cpm): 7378



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1	11/19/2010 7:34	116	158	-42	512-BKGDS1A	387	
2	11/19/2010 7:35	132	158	-26	512-BKGDS1A	387	
3	11/19/2010 7:37	145	158	-13	512-BKGDS1A	387	
4	11/19/2010 7:38	131	158	-27	512-BKGDS1A	387	
5	11/19/2010 7:39	171	158	13	512-BKGDS1A	387	
6	11/19/2010 7:41	146	158	-12	512-BKGDS1A	387	
7	11/19/2010 7:42	125	158	-33	512-BKGDS1A	387	
8	11/19/2010 7:43	155	158	-3	512-BKGDS1A	387	
9	11/19/2010 7:45	151	158	-7	512-BKGDS1A	387	
10	11/19/2010 7:46	152	158	-6	512-BKGDS1A	387	
11	11/19/2010 7:47	151	158	-7	512-BKGDS1A	387	
12	11/19/2010 7:49	154	158	-4	512-BKGDS1A	387	
13	11/19/2010 7:50	155	158	-3	512-BKGDS1A	387	
14	11/19/2010 7:51	152	158	-6	512-BKGDS1A	387	
15	11/19/2010 7:53	139	158	-19	512-BKGDS1A	387	
16	11/19/2010 7:54	102	158	-56	512-BKGDS1A	387	
17	11/19/2010 7:55	137	158	-21	512-BKGDS1A	387	
18	11/19/2010 7:56	135	158	-23	512-BKGDS1A	387	
19	11/19/2010 7:57	133	158	-25	512-BKGDS1A	387	
20	11/19/2010 7:59	149	158	-9	512-BKGDS1A	387	
21	11/30/2010 8:15	220	158	62	512-BKGDS1A	387	
22	11/30/2010 8:20	154	158	-4	512-BKGDS1A	387	
23	11/30/2010 8:22	152	158	-6	512-BKGDS1A	387	
24	11/30/2010 8:25	162	158	4	512-BKGDS1A	387	
25	11/30/2010 8:28	157	158	-1	512-BKGDS1A	387	
26	11/30/2010 8:33	170	158	12	512-BKGDS1A	387	
27	11/30/2010 8:35	155	158	-3	512-BKGDS1A	387	
28	11/30/2010 8:36	160	158	2	512-BKGDS1A	387	
29	11/30/2010 8:37	145	158	-13	512-BKGDS1A	387	
30	11/30/2010 8:40	151	158	-7	512-BKGDS1A	387	
31	11/30/2010 8:42	146	158	-12	512-BKGDS1A	387	
32	11/30/2010 9:26	174	158	16	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
33	11/30/2010 9:28	175	158	17	512-BKGDS1A	387	
34	11/30/2010 9:29	154	158	-4	512-BKGDS1A	387	
35	11/30/2010 9:31	145	158	-13	512-BKGDS1A	387	
36	11/30/2010 9:32	148	158	-10	512-BKGDS1A	387	
37	1/17/2011 12:42	218	158	60	512-BKGDS1A	387	
38	1/17/2011 12:44	180	158	22	512-BKGDS1A	387	
39	1/17/2011 12:45	186	158	28	512-BKGDS1A	387	
40	2/15/2011 13:58	202	158	44	512-BKGDS1A	387	
41	2/15/2011 14:00	208	158	50	512-BKGDS1A	387	
42	3/8/2011 11:34	169	158	11	512-BKGDS1A	387	
43	3/8/2011 11:35	193	158	35	512-BKGDS1A	387	
44	3/8/2011 11:36	167	158	9	512-BKGDS1A	387	
45	3/8/2011 11:38	172	158	14	512-BKGDS1A	387	
46	3/8/2011 11:39	176	158	18	512-BKGDS1A	387	
47	3/8/2011 11:40	164	158	6	512-BKGDS1A	387	
48	3/8/2011 11:41	139	158	-19	512-BKGDS1A	387	
49	3/8/2011 11:43	155	158	-3	512-BKGDS1A	387	
50	3/8/2011 11:44	157	158	-1	512-BKGDS1A	387	
51	3/8/2011 11:45	135	158	-23	512-BKGDS1A	387	
52	3/8/2011 11:47	164	158	6	512-BKGDS1A	387	
53	3/8/2011 11:48	166	158	8	512-BKGDS1A	387	
54	3/8/2011 11:49	158	158	0	512-BKGDS1A	387	
55	3/8/2011 11:50	140	158	-18	512-BKGDS1A	387	
56	3/8/2011 11:51	140	158	-18	512-BKGDS1A	387	
57	3/8/2011 11:52	130	158	-28	512-BKGDS1A	387	
58	3/8/2011 12:41	196	158	38	512-BKGDS1A	387	
59	3/8/2011 12:42	136	158	-22	512-BKGDS1A	387	
60	3/8/2011 12:43	145	158	-13	512-BKGDS1A	387	
61	3/8/2011 12:45	202	158	44	512-BKGDS1A	387	
62	5/6/2011 11:08	209	158	51	512-BKGDS1A	387	
63	5/6/2011 11:09	178	158	20	512-BKGDS1A	387	
64	6/8/2011 10:40	180	158	22	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
65	6/8/2011 10:41	177	158	19	512-BKGDS1A	387	
66	6/8/2011 11:00	133	158	-25	512-BKGDS1A	387	
67	6/8/2011 11:01	135	158	-23	512-BKGDS1A	387	
68	6/8/2011 11:02	171	158	13	512-BKGDS1A	387	
69	6/8/2011 11:04	142	158	-16	512-BKGDS1A	387	
70	6/8/2011 11:05	138	158	-20	512-BKGDS1A	387	
71	6/8/2011 11:06	148	158	-10	512-BKGDS1A	387	
72	6/8/2011 11:07	137	158	-21	512-BKGDS1A	387	
73	6/8/2011 11:08	144	158	-14	512-BKGDS1A	387	
74	6/8/2011 11:09	153	158	-5	512-BKGDS1A	387	
75	6/8/2011 11:10	132	158	-26	512-BKGDS1A	387	
76	6/8/2011 11:11	129	158	-29	512-BKGDS1A	387	
77	6/8/2011 11:17	136	158	-22	512-BKGDS1A	387	
78	6/8/2011 11:18	124	158	-34	512-BKGDS1A	387	
79	6/8/2011 11:19	128	158	-30	512-BKGDS1A	387	
80	6/8/2011 11:20	157	158	-1	512-BKGDS1A	387	
81	6/8/2011 11:21	135	158	-23	512-BKGDS1A	387	
82	6/8/2011 11:22	104	158	-54	512-BKGDS1A	387	
83	6/8/2011 11:23	147	158	-11	512-BKGDS1A	387	

Net Gamma cpm Min: -56

Summary Avg: -3

Max: 62

St Dev: 24

Readings > 3σ investigation level are highlighted in blue

* Background ID correlates to instrument reference area background identification number

Gamma measurements > 3σ investigation level are verified by 2360 beta measurements



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1	11/10/2010 14:43	168	158	10	512-BKGDS1A	387	
2	11/10/2010 14:43	97	158	-61	512-BKGDS1A	387	
3	11/10/2010 14:43	146	158	-12	512-BKGDS1A	387	
4	11/10/2010 14:44	133	158	-25	512-BKGDS1A	387	
5	11/10/2010 14:44	173	158	15	512-BKGDS1A	387	
6	11/10/2010 14:44	158	158	0	512-BKGDS1A	387	
7	11/10/2010 14:44	137	158	-21	512-BKGDS1A	387	
8	11/10/2010 14:44	121	158	-37	512-BKGDS1A	387	
9	11/10/2010 14:44	148	158	-10	512-BKGDS1A	387	
10	11/10/2010 14:44	143	158	-15	512-BKGDS1A	387	
11	11/10/2010 14:44	147	158	-11	512-BKGDS1A	387	
12	11/10/2010 14:44	128	158	-30	512-BKGDS1A	387	
13	11/10/2010 14:45	127	158	-31	512-BKGDS1A	387	
14	11/10/2010 14:45	118	158	-40	512-BKGDS1A	387	
15	11/10/2010 14:45	121	158	-37	512-BKGDS1A	387	
16	11/10/2010 14:45	177	158	19	512-BKGDS1A	387	
17	11/10/2010 14:45	180	158	22	512-BKGDS1A	387	
18	11/10/2010 14:45	174	158	16	512-BKGDS1A	387	
19	11/10/2010 14:45	149	158	-9	512-BKGDS1A	387	
20	11/10/2010 14:45	190	158	32	512-BKGDS1A	387	
21	11/10/2010 14:46	165	158	7	512-BKGDS1A	387	
22	11/10/2010 14:46	153	158	-5	512-BKGDS1A	387	
23	11/10/2010 14:46	150	158	-8	512-BKGDS1A	387	
24	11/10/2010 14:46	123	158	-35	512-BKGDS1A	387	
25	11/10/2010 14:46	152	158	-6	512-BKGDS1A	387	
26	11/10/2010 14:46	126	158	-32	512-BKGDS1A	387	
27	11/10/2010 14:46	127	158	-31	512-BKGDS1A	387	
28	11/10/2010 14:46	119	158	-39	512-BKGDS1A	387	
29	11/10/2010 14:46	120	158	-38	512-BKGDS1A	387	
30	11/10/2010 14:47	132	158	-26	512-BKGDS1A	387	
31	11/10/2010 14:47	148	158	-10	512-BKGDS1A	387	
32	11/10/2010 14:47	142	158	-16	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
33	11/10/2010 14:47	178	158	20	512-BKGDS1A	387	
34	11/10/2010 14:47	166	158	8	512-BKGDS1A	387	
35	11/10/2010 14:47	138	158	-20	512-BKGDS1A	387	
36	11/10/2010 14:47	117	158	-41	512-BKGDS1A	387	
37	11/10/2010 14:47	137	158	-21	512-BKGDS1A	387	
38	11/10/2010 14:48	137	158	-21	512-BKGDS1A	387	
39	11/10/2010 14:48	154	158	-4	512-BKGDS1A	387	
40	11/10/2010 14:48	173	158	15	512-BKGDS1A	387	
41	11/10/2010 14:48	145	158	-13	512-BKGDS1A	387	
42	11/10/2010 14:48	135	158	-23	512-BKGDS1A	387	
43	11/10/2010 14:48	127	158	-31	512-BKGDS1A	387	
44	11/10/2010 14:49	95	158	-63	512-BKGDS1A	387	
45	11/10/2010 14:49	101	158	-57	512-BKGDS1A	387	
46	11/10/2010 14:49	146	158	-12	512-BKGDS1A	387	
47	11/10/2010 14:49	134	158	-24	512-BKGDS1A	387	
48	11/10/2010 14:50	149	158	-9	512-BKGDS1A	387	
49	11/10/2010 14:50	150	158	-8	512-BKGDS1A	387	
50	11/10/2010 14:50	150	158	-8	512-BKGDS1A	387	
51	11/10/2010 14:50	142	158	-16	512-BKGDS1A	387	
52	11/10/2010 14:50	190	158	32	512-BKGDS1A	387	
53	11/10/2010 14:50	155	158	-3	512-BKGDS1A	387	
54	11/10/2010 14:50	143	158	-15	512-BKGDS1A	387	
55	11/10/2010 14:50	137	158	-21	512-BKGDS1A	387	
56	11/10/2010 14:50	117	158	-41	512-BKGDS1A	387	
57	11/10/2010 14:51	125	158	-33	512-BKGDS1A	387	
58	11/10/2010 14:51	127	158	-31	512-BKGDS1A	387	
59	11/10/2010 14:51	132	158	-26	512-BKGDS1A	387	
60	11/10/2010 14:51	135	158	-23	512-BKGDS1A	387	
61	11/10/2010 14:51	137	158	-21	512-BKGDS1A	387	
62	11/10/2010 14:51	124	158	-34	512-BKGDS1A	387	
63	11/10/2010 14:51	138	158	-20	512-BKGDS1A	387	
64	11/10/2010 14:51	109	158	-49	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
65	11/10/2010 14:52	160	158	2	512-BKGDS1A	387	
66	11/10/2010 14:52	192	158	34	512-BKGDS1A	387	
67	11/10/2010 14:52	192	158	34	512-BKGDS1A	387	
68	11/10/2010 14:52	172	158	14	512-BKGDS1A	387	
69	11/10/2010 14:52	152	158	-6	512-BKGDS1A	387	
70	11/10/2010 14:52	139	158	-19	512-BKGDS1A	387	
71	11/10/2010 14:52	117	158	-41	512-BKGDS1A	387	
72	11/10/2010 14:52	125	158	-33	512-BKGDS1A	387	
73	11/10/2010 14:52	125	158	-33	512-BKGDS1A	387	
74	11/10/2010 14:53	135	158	-23	512-BKGDS1A	387	
75	11/10/2010 14:53	148	158	-10	512-BKGDS1A	387	
76	11/10/2010 14:53	126	158	-32	512-BKGDS1A	387	
77	11/10/2010 14:53	111	158	-47	512-BKGDS1A	387	
78	11/10/2010 14:53	82	158	-76	512-BKGDS1A	387	
79	11/10/2010 14:53	107	158	-51	512-BKGDS1A	387	
80	11/10/2010 14:53	91	158	-67	512-BKGDS1A	387	
81	11/10/2010 14:53	117	158	-41	512-BKGDS1A	387	
82	11/10/2010 14:54	105	158	-53	512-BKGDS1A	387	
83	11/10/2010 14:54	123	158	-35	512-BKGDS1A	387	
84	11/10/2010 14:54	114	158	-44	512-BKGDS1A	387	
85	11/10/2010 14:54	124	158	-34	512-BKGDS1A	387	
86	11/10/2010 14:54	149	158	-9	512-BKGDS1A	387	
87	11/10/2010 14:55	54	158	-104	512-BKGDS1A	387	
88	11/10/2010 14:55	109	158	-49	512-BKGDS1A	387	
89	11/10/2010 14:55	134	158	-24	512-BKGDS1A	387	
90	11/10/2010 14:55	130	158	-28	512-BKGDS1A	387	
91	11/10/2010 14:55	135	158	-23	512-BKGDS1A	387	
92	11/10/2010 14:55	143	158	-15	512-BKGDS1A	387	
93	11/10/2010 14:55	133	158	-25	512-BKGDS1A	387	
94	11/10/2010 14:55	178	158	20	512-BKGDS1A	387	
95	11/10/2010 14:56	160	158	2	512-BKGDS1A	387	
96	11/10/2010 14:56	130	158	-28	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
97	11/10/2010 14:56	150	158	-8	512-BKGDS1A	387	
98	11/10/2010 14:56	138	158	-20	512-BKGDS1A	387	
99	11/10/2010 14:56	154	158	-4	512-BKGDS1A	387	
100	11/10/2010 14:56	187	158	29	512-BKGDS1A	387	
101	11/10/2010 14:56	167	158	9	512-BKGDS1A	387	
102	11/10/2010 14:56	154	158	-4	512-BKGDS1A	387	
103	11/10/2010 14:56	149	158	-9	512-BKGDS1A	387	
104	11/10/2010 14:57	175	158	17	512-BKGDS1A	387	
105	11/10/2010 14:57	150	158	-8	512-BKGDS1A	387	
106	11/10/2010 14:57	118	158	-40	512-BKGDS1A	387	
107	11/10/2010 14:57	176	158	18	512-BKGDS1A	387	
108	11/10/2010 14:57	163	158	5	512-BKGDS1A	387	
109	11/10/2010 14:57	190	158	32	512-BKGDS1A	387	
110	11/10/2010 14:57	178	158	20	512-BKGDS1A	387	
111	11/10/2010 14:57	158	158	0	512-BKGDS1A	387	
112	11/10/2010 14:57	130	158	-28	512-BKGDS1A	387	
113	11/10/2010 14:58	137	158	-21	512-BKGDS1A	387	
114	11/10/2010 14:58	167	158	9	512-BKGDS1A	387	
115	11/10/2010 14:58	146	158	-12	512-BKGDS1A	387	
116	11/10/2010 14:58	141	158	-17	512-BKGDS1A	387	
117	11/10/2010 14:58	134	158	-24	512-BKGDS1A	387	
118	11/10/2010 14:58	93	158	-65	512-BKGDS1A	387	
119	11/10/2010 14:58	125	158	-33	512-BKGDS1A	387	
120	11/10/2010 14:58	125	158	-33	512-BKGDS1A	387	
121	11/10/2010 14:59	88	158	-70	512-BKGDS1A	387	
122	11/10/2010 14:59	108	158	-50	512-BKGDS1A	387	
123	11/10/2010 14:59	92	158	-66	512-BKGDS1A	387	
124	11/10/2010 14:59	122	158	-36	512-BKGDS1A	387	
125	11/10/2010 14:59	115	158	-43	512-BKGDS1A	387	
126	11/10/2010 14:59	158	158	0	512-BKGDS1A	387	
127	11/10/2010 14:59	136	158	-22	512-BKGDS1A	387	
128	11/10/2010 14:59	135	158	-23	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
129	11/10/2010 14:59	99	158	-59	512-BKGDS1A	387	
130	11/10/2010 15:00	53	158	-105	512-BKGDS1A	387	
131	11/10/2010 15:00	110	158	-48	512-BKGDS1A	387	
132	11/10/2010 15:00	158	158	0	512-BKGDS1A	387	
133	11/10/2010 15:00	139	158	-19	512-BKGDS1A	387	
134	11/10/2010 15:00	126	158	-32	512-BKGDS1A	387	
135	11/10/2010 15:00	129	158	-29	512-BKGDS1A	387	
136	11/10/2010 15:01	151	158	-7	512-BKGDS1A	387	
137	11/10/2010 15:01	148	158	-10	512-BKGDS1A	387	
138	11/10/2010 15:01	153	158	-5	512-BKGDS1A	387	
139	11/10/2010 15:01	157	158	-1	512-BKGDS1A	387	
140	11/10/2010 15:01	130	158	-28	512-BKGDS1A	387	
141	11/10/2010 15:01	132	158	-26	512-BKGDS1A	387	
142	11/10/2010 15:01	140	158	-18	512-BKGDS1A	387	
143	11/10/2010 15:01	127	158	-31	512-BKGDS1A	387	
144	11/10/2010 15:01	131	158	-27	512-BKGDS1A	387	
145	11/10/2010 15:02	149	158	-9	512-BKGDS1A	387	
146	11/10/2010 15:02	96	158	-62	512-BKGDS1A	387	
147	11/10/2010 15:02	110	158	-48	512-BKGDS1A	387	
148	11/10/2010 15:02	105	158	-53	512-BKGDS1A	387	
149	11/10/2010 15:02	144	158	-14	512-BKGDS1A	387	
150	11/10/2010 15:02	180	158	22	512-BKGDS1A	387	
151	11/10/2010 15:02	187	158	29	512-BKGDS1A	387	
152	11/10/2010 15:02	153	158	-5	512-BKGDS1A	387	
153	11/10/2010 15:03	165	158	7	512-BKGDS1A	387	
154	11/10/2010 15:03	163	158	5	512-BKGDS1A	387	
155	11/10/2010 15:03	131	158	-27	512-BKGDS1A	387	
156	11/10/2010 15:03	127	158	-31	512-BKGDS1A	387	
157	11/10/2010 15:03	105	158	-53	512-BKGDS1A	387	
158	11/10/2010 15:03	147	158	-11	512-BKGDS1A	387	
159	11/10/2010 15:03	156	158	-2	512-BKGDS1A	387	
160	11/10/2010 15:03	155	158	-3	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
161	11/10/2010 15:03	154	158	-4	512-BKGD51A	387	
162	11/10/2010 15:04	142	158	-16	512-BKGD51A	387	
163	11/10/2010 15:04	131	158	-27	512-BKGD51A	387	
164	11/10/2010 15:04	103	158	-55	512-BKGD51A	387	
165	11/10/2010 15:04	116	158	-42	512-BKGD51A	387	
166	11/10/2010 15:04	157	158	-1	512-BKGD51A	387	
167	11/10/2010 15:04	158	158	0	512-BKGD51A	387	
168	11/10/2010 15:04	136	158	-22	512-BKGD51A	387	
169	11/10/2010 15:04	182	158	24	512-BKGD51A	387	
170	11/10/2010 15:05	163	158	5	512-BKGD51A	387	
171	11/10/2010 15:05	149	158	-9	512-BKGD51A	387	
172	11/10/2010 15:05	140	158	-18	512-BKGD51A	387	
173	11/10/2010 15:05	75	158	-83	512-BKGD51A	387	
174	11/10/2010 15:05	119	158	-39	512-BKGD51A	387	
175	11/10/2010 15:05	112	158	-46	512-BKGD51A	387	
176	11/10/2010 15:06	131	158	-27	512-BKGD51A	387	
177	11/10/2010 15:06	121	158	-37	512-BKGD51A	387	
178	11/10/2010 15:06	148	158	-10	512-BKGD51A	387	
179	11/10/2010 15:06	162	158	4	512-BKGD51A	387	
180	11/10/2010 15:06	133	158	-25	512-BKGD51A	387	
181	11/10/2010 15:06	90	158	-68	512-BKGD51A	387	
182	11/10/2010 15:06	163	158	5	512-BKGD51A	387	
183	11/10/2010 15:06	153	158	-5	512-BKGD51A	387	
184	11/10/2010 15:06	148	158	-10	512-BKGD51A	387	
185	11/10/2010 15:07	111	158	-47	512-BKGD51A	387	
186	11/10/2010 15:07	178	158	20	512-BKGD51A	387	
187	11/10/2010 15:07	180	158	22	512-BKGD51A	387	
188	11/10/2010 15:07	196	158	38	512-BKGD51A	387	
189	11/10/2010 15:07	150	158	-8	512-BKGD51A	387	
190	11/10/2010 15:07	168	158	10	512-BKGD51A	387	
191	11/10/2010 15:07	176	158	18	512-BKGD51A	387	
192	11/10/2010 15:07	197	158	39	512-BKGD51A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
193	11/10/2010 15:08	150	158	-8	512-BKGDS1A	387	
194	11/10/2010 15:08	183	158	25	512-BKGDS1A	387	
195	11/10/2010 15:08	169	158	11	512-BKGDS1A	387	
196	11/10/2010 15:08	132	158	-26	512-BKGDS1A	387	
197	11/10/2010 15:08	116	158	-42	512-BKGDS1A	387	
198	11/10/2010 15:08	138	158	-20	512-BKGDS1A	387	
199	11/10/2010 15:08	110	158	-48	512-BKGDS1A	387	
200	11/10/2010 15:08	146	158	-12	512-BKGDS1A	387	
201	11/10/2010 15:08	151	158	-7	512-BKGDS1A	387	
202	11/10/2010 15:09	147	158	-11	512-BKGDS1A	387	
203	11/10/2010 15:09	179	158	21	512-BKGDS1A	387	
204	11/10/2010 15:09	122	158	-36	512-BKGDS1A	387	
205	11/10/2010 15:09	143	158	-15	512-BKGDS1A	387	
206	11/10/2010 15:09	144	158	-14	512-BKGDS1A	387	
207	11/10/2010 15:09	184	158	26	512-BKGDS1A	387	
208	11/10/2010 15:09	188	158	30	512-BKGDS1A	387	
209	11/10/2010 15:09	181	158	23	512-BKGDS1A	387	
210	11/10/2010 15:10	184	158	26	512-BKGDS1A	387	
211	11/10/2010 15:10	188	158	30	512-BKGDS1A	387	
212	11/10/2010 15:10	160	158	2	512-BKGDS1A	387	
213	11/10/2010 15:18	74	158	-84	512-BKGDS1A	387	
214	11/10/2010 15:19	88	158	-70	512-BKGDS1A	387	
215	11/10/2010 15:19	141	158	-17	512-BKGDS1A	387	
216	11/10/2010 15:19	119	158	-39	512-BKGDS1A	387	
217	11/10/2010 15:19	165	158	7	512-BKGDS1A	387	
218	11/10/2010 15:19	147	158	-11	512-BKGDS1A	387	
219	11/10/2010 15:19	165	158	7	512-BKGDS1A	387	
220	11/10/2010 15:19	175	158	17	512-BKGDS1A	387	
221	11/10/2010 15:19	150	158	-8	512-BKGDS1A	387	
222	11/10/2010 15:20	154	158	-4	512-BKGDS1A	387	
223	11/10/2010 15:20	170	158	12	512-BKGDS1A	387	
224	11/10/2010 15:20	176	158	18	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
225	11/10/2010 15:20	149	158	-9	512-BKGD51A	387	
226	11/10/2010 15:20	131	158	-27	512-BKGD51A	387	
227	11/10/2010 15:20	139	158	-19	512-BKGD51A	387	
228	11/10/2010 15:20	148	158	-10	512-BKGD51A	387	
229	11/10/2010 15:20	224	158	66	512-BKGD51A	387	
230	11/10/2010 15:20	185	158	27	512-BKGD51A	387	
231	11/10/2010 15:21	179	158	21	512-BKGD51A	387	
232	11/10/2010 15:21	164	158	6	512-BKGD51A	387	
233	11/10/2010 15:21	192	158	34	512-BKGD51A	387	
234	11/10/2010 15:21	155	158	-3	512-BKGD51A	387	
235	11/10/2010 15:21	165	158	7	512-BKGD51A	387	
236	11/10/2010 15:21	155	158	-3	512-BKGD51A	387	
237	11/10/2010 15:21	142	158	-16	512-BKGD51A	387	
238	11/10/2010 15:21	192	158	34	512-BKGD51A	387	
239	11/10/2010 15:22	143	158	-15	512-BKGD51A	387	
240	11/10/2010 15:22	181	158	23	512-BKGD51A	387	
241	11/10/2010 15:22	173	158	15	512-BKGD51A	387	
242	11/10/2010 15:22	138	158	-20	512-BKGD51A	387	
243	11/10/2010 15:22	150	158	-8	512-BKGD51A	387	
244	11/10/2010 15:22	160	158	2	512-BKGD51A	387	
245	11/10/2010 15:22	195	158	37	512-BKGD51A	387	
246	11/10/2010 15:22	151	158	-7	512-BKGD51A	387	
247	11/10/2010 15:22	129	158	-29	512-BKGD51A	387	
248	11/10/2010 15:23	160	158	2	512-BKGD51A	387	
249	11/10/2010 15:23	135	158	-23	512-BKGD51A	387	
250	11/10/2010 15:23	106	158	-52	512-BKGD51A	387	
251	11/10/2010 15:23	115	158	-43	512-BKGD51A	387	
252	11/10/2010 15:23	107	158	-51	512-BKGD51A	387	
253	11/10/2010 15:23	120	158	-38	512-BKGD51A	387	
254	11/10/2010 15:23	121	158	-37	512-BKGD51A	387	
255	11/10/2010 15:23	90	158	-68	512-BKGD51A	387	
256	11/10/2010 15:24	131	158	-27	512-BKGD51A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
257	11/10/2010 15:24	126	158	-32	512-BKGDS1A	387	
258	11/10/2010 15:24	96	158	-62	512-BKGDS1A	387	
259	11/10/2010 15:24	89	158	-69	512-BKGDS1A	387	
260	11/10/2010 15:24	102	158	-56	512-BKGDS1A	387	
261	11/10/2010 15:25	105	158	-53	512-BKGDS1A	387	
262	11/10/2010 15:25	110	158	-48	512-BKGDS1A	387	
263	11/10/2010 15:25	139	158	-19	512-BKGDS1A	387	
264	11/10/2010 15:25	126	158	-32	512-BKGDS1A	387	
265	11/10/2010 15:25	117	158	-41	512-BKGDS1A	387	
266	11/10/2010 15:25	118	158	-40	512-BKGDS1A	387	
267	11/10/2010 15:25	122	158	-36	512-BKGDS1A	387	
268	11/10/2010 15:25	143	158	-15	512-BKGDS1A	387	
269	11/10/2010 15:25	120	158	-38	512-BKGDS1A	387	
270	11/10/2010 15:26	146	158	-12	512-BKGDS1A	387	
271	11/10/2010 15:26	172	158	14	512-BKGDS1A	387	
272	11/10/2010 15:26	156	158	-2	512-BKGDS1A	387	
273	11/10/2010 15:26	145	158	-13	512-BKGDS1A	387	
274	11/10/2010 15:26	143	158	-15	512-BKGDS1A	387	
275	11/10/2010 15:26	165	158	7	512-BKGDS1A	387	
276	11/10/2010 15:26	188	158	30	512-BKGDS1A	387	
277	11/10/2010 15:26	155	158	-3	512-BKGDS1A	387	
278	11/10/2010 15:26	125	158	-33	512-BKGDS1A	387	
279	11/10/2010 15:27	136	158	-22	512-BKGDS1A	387	
280	11/10/2010 15:27	126	158	-32	512-BKGDS1A	387	
281	11/10/2010 15:27	132	158	-26	512-BKGDS1A	387	
282	11/10/2010 15:27	117	158	-41	512-BKGDS1A	387	
283	11/10/2010 15:27	114	158	-44	512-BKGDS1A	387	
284	11/10/2010 15:27	137	158	-21	512-BKGDS1A	387	
285	11/10/2010 15:27	153	158	-5	512-BKGDS1A	387	
286	11/10/2010 15:27	129	158	-29	512-BKGDS1A	387	
287	11/10/2010 15:28	116	158	-42	512-BKGDS1A	387	
288	11/10/2010 15:28	215	158	57	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
289	11/10/2010 15:28	162	158	4	512-BKGD51A	387	
290	11/10/2010 15:28	142	158	-16	512-BKGD51A	387	
291	11/10/2010 15:28	148	158	-10	512-BKGD51A	387	
292	11/10/2010 15:28	143	158	-15	512-BKGD51A	387	
293	11/10/2010 15:28	160	158	2	512-BKGD51A	387	
294	11/10/2010 15:28	176	158	18	512-BKGD51A	387	
295	11/10/2010 15:28	179	158	21	512-BKGD51A	387	
296	11/10/2010 15:29	143	158	-15	512-BKGD51A	387	
297	11/10/2010 15:29	125	158	-33	512-BKGD51A	387	
298	11/10/2010 15:29	120	158	-38	512-BKGD51A	387	
299	11/10/2010 15:29	129	158	-29	512-BKGD51A	387	
300	11/10/2010 15:29	125	158	-33	512-BKGD51A	387	
301	11/11/2010 7:25	57	158	-101	512-BKGD51A	387	
302	11/11/2010 7:25	78	158	-80	512-BKGD51A	387	
303	11/11/2010 7:25	124	158	-34	512-BKGD51A	387	
304	11/11/2010 7:25	143	158	-15	512-BKGD51A	387	
305	11/11/2010 7:25	150	158	-8	512-BKGD51A	387	
306	11/11/2010 7:25	171	158	13	512-BKGD51A	387	
307	11/11/2010 7:25	163	158	5	512-BKGD51A	387	
308	11/11/2010 7:25	162	158	4	512-BKGD51A	387	
309	11/11/2010 7:26	123	158	-35	512-BKGD51A	387	
310	11/11/2010 7:26	130	158	-28	512-BKGD51A	387	
311	11/11/2010 7:26	162	158	4	512-BKGD51A	387	
312	11/11/2010 7:26	165	158	7	512-BKGD51A	387	
313	11/11/2010 7:26	134	158	-24	512-BKGD51A	387	
314	11/11/2010 7:26	143	158	-15	512-BKGD51A	387	
315	11/11/2010 7:26	130	158	-28	512-BKGD51A	387	
316	11/11/2010 7:26	150	158	-8	512-BKGD51A	387	
317	11/11/2010 7:27	124	158	-34	512-BKGD51A	387	
318	11/11/2010 7:27	124	158	-34	512-BKGD51A	387	
319	11/11/2010 7:27	173	158	15	512-BKGD51A	387	
320	11/11/2010 7:27	152	158	-6	512-BKGD51A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
321	11/11/2010 7:27	162	158	4	512-BKGDS1A	387	
322	11/11/2010 7:27	145	158	-13	512-BKGDS1A	387	
323	11/11/2010 7:27	159	158	1	512-BKGDS1A	387	
324	11/11/2010 7:27	150	158	-8	512-BKGDS1A	387	
325	11/11/2010 7:27	157	158	-1	512-BKGDS1A	387	
326	11/11/2010 7:28	130	158	-28	512-BKGDS1A	387	
327	11/11/2010 7:28	122	158	-36	512-BKGDS1A	387	
328	11/11/2010 7:28	117	158	-41	512-BKGDS1A	387	
329	11/11/2010 7:28	115	158	-43	512-BKGDS1A	387	
330	11/11/2010 7:28	139	158	-19	512-BKGDS1A	387	
331	11/11/2010 7:28	120	158	-38	512-BKGDS1A	387	
332	11/11/2010 7:28	127	158	-31	512-BKGDS1A	387	
333	11/11/2010 7:28	137	158	-21	512-BKGDS1A	387	
334	11/11/2010 7:29	147	158	-11	512-BKGDS1A	387	
335	11/11/2010 7:29	131	158	-27	512-BKGDS1A	387	
336	11/11/2010 7:29	136	158	-22	512-BKGDS1A	387	
337	11/11/2010 7:29	144	158	-14	512-BKGDS1A	387	
338	11/11/2010 7:29	126	158	-32	512-BKGDS1A	387	
339	11/11/2010 7:29	107	158	-51	512-BKGDS1A	387	
340	11/11/2010 7:29	104	158	-54	512-BKGDS1A	387	
341	11/11/2010 7:29	155	158	-3	512-BKGDS1A	387	
342	11/11/2010 7:29	156	158	-2	512-BKGDS1A	387	
343	11/11/2010 7:30	188	158	30	512-BKGDS1A	387	
344	11/11/2010 7:30	74	158	-84	512-BKGDS1A	387	
345	11/11/2010 7:30	77	158	-81	512-BKGDS1A	387	
346	11/11/2010 7:31	141	158	-17	512-BKGDS1A	387	
347	11/11/2010 7:31	175	158	17	512-BKGDS1A	387	
348	11/11/2010 7:31	162	158	4	512-BKGDS1A	387	
349	11/11/2010 7:31	163	158	5	512-BKGDS1A	387	
350	11/11/2010 7:31	195	158	37	512-BKGDS1A	387	
351	11/11/2010 7:31	152	158	-6	512-BKGDS1A	387	
352	11/11/2010 7:31	137	158	-21	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
353	11/11/2010 7:31	136	158	-22	512-BKGDS1A	387	
354	11/11/2010 7:32	132	158	-26	512-BKGDS1A	387	
355	11/11/2010 7:32	116	158	-42	512-BKGDS1A	387	
356	11/11/2010 7:32	128	158	-30	512-BKGDS1A	387	
357	11/11/2010 7:32	142	158	-16	512-BKGDS1A	387	
358	11/11/2010 7:32	170	158	12	512-BKGDS1A	387	
359	11/11/2010 7:32	190	158	32	512-BKGDS1A	387	
360	11/11/2010 7:32	162	158	4	512-BKGDS1A	387	
361	11/11/2010 7:32	144	158	-14	512-BKGDS1A	387	
362	11/11/2010 7:32	155	158	-3	512-BKGDS1A	387	
363	11/11/2010 7:33	171	158	13	512-BKGDS1A	387	
364	11/11/2010 7:33	143	158	-15	512-BKGDS1A	387	
365	11/11/2010 7:33	121	158	-37	512-BKGDS1A	387	
366	11/11/2010 7:33	125	158	-33	512-BKGDS1A	387	
367	11/11/2010 7:33	124	158	-34	512-BKGDS1A	387	
368	11/11/2010 7:33	149	158	-9	512-BKGDS1A	387	
369	11/11/2010 7:33	140	158	-18	512-BKGDS1A	387	
370	11/11/2010 7:33	132	158	-26	512-BKGDS1A	387	
371	11/11/2010 7:33	145	158	-13	512-BKGDS1A	387	
372	11/11/2010 7:34	136	158	-22	512-BKGDS1A	387	
373	11/11/2010 7:34	124	158	-34	512-BKGDS1A	387	
374	11/11/2010 7:34	132	158	-26	512-BKGDS1A	387	
375	11/11/2010 7:34	116	158	-42	512-BKGDS1A	387	
376	11/11/2010 7:34	136	158	-22	512-BKGDS1A	387	
377	11/11/2010 7:34	102	158	-56	512-BKGDS1A	387	
378	11/11/2010 7:34	87	158	-71	512-BKGDS1A	387	
379	11/11/2010 7:34	108	158	-50	512-BKGDS1A	387	
380	11/11/2010 7:35	109	158	-49	512-BKGDS1A	387	
381	11/11/2010 7:35	131	158	-27	512-BKGDS1A	387	
382	11/11/2010 7:35	158	158	0	512-BKGDS1A	387	
383	11/11/2010 7:35	141	158	-17	512-BKGDS1A	387	
384	11/11/2010 7:35	132	158	-26	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
385	11/11/2010 7:35	108	158	-50	512-BKGDS1A	387	
386	11/11/2010 7:35	128	158	-30	512-BKGDS1A	387	
387	11/11/2010 7:36	49	158	-109	512-BKGDS1A	387	
388	11/11/2010 7:36	102	158	-56	512-BKGDS1A	387	
389	11/11/2010 7:36	129	158	-29	512-BKGDS1A	387	
390	11/11/2010 7:36	174	158	16	512-BKGDS1A	387	
391	11/11/2010 7:36	156	158	-2	512-BKGDS1A	387	
392	11/11/2010 7:36	142	158	-16	512-BKGDS1A	387	
393	11/11/2010 7:37	143	158	-15	512-BKGDS1A	387	
394	11/11/2010 7:37	151	158	-7	512-BKGDS1A	387	
395	11/11/2010 7:37	130	158	-28	512-BKGDS1A	387	
396	11/11/2010 7:37	141	158	-17	512-BKGDS1A	387	
397	11/11/2010 7:37	128	158	-30	512-BKGDS1A	387	
398	11/11/2010 7:37	138	158	-20	512-BKGDS1A	387	
399	11/11/2010 7:37	148	158	-10	512-BKGDS1A	387	
400	11/11/2010 7:37	176	158	18	512-BKGDS1A	387	
401	11/11/2010 7:37	147	158	-11	512-BKGDS1A	387	
402	11/11/2010 7:38	154	158	-4	512-BKGDS1A	387	
403	11/11/2010 7:38	154	158	-4	512-BKGDS1A	387	
404	11/11/2010 7:38	169	158	11	512-BKGDS1A	387	
405	11/11/2010 7:38	176	158	18	512-BKGDS1A	387	
406	11/11/2010 7:38	170	158	12	512-BKGDS1A	387	
407	11/11/2010 7:38	150	158	-8	512-BKGDS1A	387	
408	11/11/2010 7:38	147	158	-11	512-BKGDS1A	387	
409	11/11/2010 7:38	116	158	-42	512-BKGDS1A	387	
410	11/11/2010 7:38	155	158	-3	512-BKGDS1A	387	
411	11/11/2010 7:39	156	158	-2	512-BKGDS1A	387	
412	11/11/2010 7:39	153	158	-5	512-BKGDS1A	387	
413	11/11/2010 7:39	170	158	12	512-BKGDS1A	387	
414	11/11/2010 7:39	152	158	-6	512-BKGDS1A	387	
415	11/11/2010 7:39	159	158	1	512-BKGDS1A	387	
416	11/11/2010 7:39	108	158	-50	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
417	11/11/2010 7:39	121	158	-37	512-BKGD51A	387	
418	11/11/2010 7:39	146	158	-12	512-BKGD51A	387	
419	11/11/2010 7:40	174	158	16	512-BKGD51A	387	
420	11/11/2010 7:40	163	158	5	512-BKGD51A	387	
421	11/11/2010 7:40	141	158	-17	512-BKGD51A	387	
422	11/11/2010 7:40	132	158	-26	512-BKGD51A	387	
423	11/11/2010 7:40	150	158	-8	512-BKGD51A	387	
424	11/11/2010 7:40	126	158	-32	512-BKGD51A	387	
425	11/11/2010 7:40	144	158	-14	512-BKGD51A	387	
426	11/11/2010 7:40	147	158	-11	512-BKGD51A	387	
427	11/11/2010 7:40	144	158	-14	512-BKGD51A	387	
428	11/11/2010 7:41	142	158	-16	512-BKGD51A	387	
429	11/11/2010 7:41	132	158	-26	512-BKGD51A	387	
430	11/11/2010 7:41	99	158	-59	512-BKGD51A	387	
431	11/11/2010 7:41	49	158	-109	512-BKGD51A	387	
432	11/11/2010 7:42	64	158	-94	512-BKGD51A	387	
433	11/11/2010 7:42	102	158	-56	512-BKGD51A	387	
434	11/11/2010 7:42	121	158	-37	512-BKGD51A	387	
435	11/11/2010 7:44	54	158	-104	512-BKGD51A	387	
436	11/11/2010 7:44	103	158	-55	512-BKGD51A	387	
437	11/11/2010 7:44	130	158	-28	512-BKGD51A	387	
438	11/11/2010 7:44	135	158	-23	512-BKGD51A	387	
439	11/11/2010 7:44	121	158	-37	512-BKGD51A	387	
440	11/11/2010 7:44	162	158	4	512-BKGD51A	387	
441	11/11/2010 7:44	140	158	-18	512-BKGD51A	387	
442	11/11/2010 7:44	124	158	-34	512-BKGD51A	387	
443	11/11/2010 7:44	142	158	-16	512-BKGD51A	387	
444	11/11/2010 7:45	154	158	-4	512-BKGD51A	387	
445	11/11/2010 7:45	130	158	-28	512-BKGD51A	387	
446	11/11/2010 7:45	134	158	-24	512-BKGD51A	387	
447	11/11/2010 7:45	150	158	-8	512-BKGD51A	387	
448	11/11/2010 7:45	154	158	-4	512-BKGD51A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
449	11/11/2010 7:45	143	158	-15	512-BKGDS1A	387	
450	11/11/2010 7:45	144	158	-14	512-BKGDS1A	387	
451	11/11/2010 7:45	163	158	5	512-BKGDS1A	387	
452	11/11/2010 7:46	144	158	-14	512-BKGDS1A	387	
453	11/11/2010 7:46	125	158	-33	512-BKGDS1A	387	
454	11/11/2010 7:46	122	158	-36	512-BKGDS1A	387	
455	11/11/2010 7:46	145	158	-13	512-BKGDS1A	387	
456	11/11/2010 7:46	134	158	-24	512-BKGDS1A	387	
457	11/11/2010 7:46	120	158	-38	512-BKGDS1A	387	
458	11/11/2010 7:46	134	158	-24	512-BKGDS1A	387	
459	11/11/2010 7:46	129	158	-29	512-BKGDS1A	387	
460	11/11/2010 7:46	106	158	-52	512-BKGDS1A	387	
461	11/11/2010 7:47	105	158	-53	512-BKGDS1A	387	
462	11/11/2010 7:47	121	158	-37	512-BKGDS1A	387	
463	11/11/2010 7:47	127	158	-31	512-BKGDS1A	387	
464	11/11/2010 7:47	145	158	-13	512-BKGDS1A	387	
465	11/11/2010 7:47	108	158	-50	512-BKGDS1A	387	
466	11/11/2010 7:47	121	158	-37	512-BKGDS1A	387	
467	11/11/2010 7:47	143	158	-15	512-BKGDS1A	387	
468	11/11/2010 7:47	133	158	-25	512-BKGDS1A	387	
469	11/11/2010 7:48	127	158	-31	512-BKGDS1A	387	
470	11/11/2010 7:48	122	158	-36	512-BKGDS1A	387	
471	11/11/2010 7:48	104	158	-54	512-BKGDS1A	387	
472	11/11/2010 7:48	114	158	-44	512-BKGDS1A	387	
473	11/11/2010 7:49	145	158	-13	512-BKGDS1A	387	
474	11/11/2010 7:49	148	158	-10	512-BKGDS1A	387	
475	11/11/2010 7:49	171	158	13	512-BKGDS1A	387	
476	11/11/2010 7:49	158	158	0	512-BKGDS1A	387	
477	11/11/2010 7:49	153	158	-5	512-BKGDS1A	387	
478	11/11/2010 7:49	191	158	33	512-BKGDS1A	387	
479	11/11/2010 7:50	146	158	-12	512-BKGDS1A	387	
480	11/11/2010 7:50	124	158	-34	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
481	11/11/2010 7:50	156	158	-2	512-BKGDS1A	387	
482	11/11/2010 7:50	148	158	-10	512-BKGDS1A	387	
483	11/11/2010 7:50	157	158	-1	512-BKGDS1A	387	
484	11/11/2010 7:50	140	158	-18	512-BKGDS1A	387	
485	11/11/2010 7:50	149	158	-9	512-BKGDS1A	387	
486	11/11/2010 7:50	132	158	-26	512-BKGDS1A	387	
487	11/11/2010 7:50	130	158	-28	512-BKGDS1A	387	
488	11/11/2010 7:51	116	158	-42	512-BKGDS1A	387	
489	11/11/2010 7:51	153	158	-5	512-BKGDS1A	387	
490	11/11/2010 7:51	133	158	-25	512-BKGDS1A	387	
491	11/11/2010 7:51	148	158	-10	512-BKGDS1A	387	
492	11/11/2010 7:51	150	158	-8	512-BKGDS1A	387	
493	11/11/2010 7:51	118	158	-40	512-BKGDS1A	387	
494	11/11/2010 7:51	110	158	-48	512-BKGDS1A	387	
495	11/11/2010 7:51	100	158	-58	512-BKGDS1A	387	
496	11/11/2010 7:52	91	158	-67	512-BKGDS1A	387	
497	11/11/2010 7:52	94	158	-64	512-BKGDS1A	387	
498	11/11/2010 7:52	118	158	-40	512-BKGDS1A	387	
499	11/11/2010 7:52	126	158	-32	512-BKGDS1A	387	
500	11/11/2010 7:52	124	158	-34	512-BKGDS1A	387	
501	11/11/2010 7:52	117	158	-41	512-BKGDS1A	387	
502	11/11/2010 7:52	175	158	17	512-BKGDS1A	387	
503	11/11/2010 7:52	152	158	-6	512-BKGDS1A	387	
504	11/11/2010 7:52	119	158	-39	512-BKGDS1A	387	
505	11/11/2010 7:53	138	158	-20	512-BKGDS1A	387	
506	11/11/2010 7:53	144	158	-14	512-BKGDS1A	387	
507	11/11/2010 7:53	127	158	-31	512-BKGDS1A	387	
508	11/11/2010 7:53	100	158	-58	512-BKGDS1A	387	
509	11/11/2010 7:53	87	158	-71	512-BKGDS1A	387	
510	11/11/2010 7:53	138	158	-20	512-BKGDS1A	387	
511	11/11/2010 7:53	119	158	-39	512-BKGDS1A	387	
512	11/11/2010 7:53	109	158	-49	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
513	11/11/2010 7:54	120	158	-38	512-BKGDS1A	387	
514	11/11/2010 7:54	128	158	-30	512-BKGDS1A	387	
515	11/11/2010 7:54	112	158	-46	512-BKGDS1A	387	
516	11/11/2010 7:54	117	158	-41	512-BKGDS1A	387	
517	11/11/2010 7:54	133	158	-25	512-BKGDS1A	387	
518	11/11/2010 7:55	106	158	-52	512-BKGDS1A	387	
519	11/11/2010 7:55	94	158	-64	512-BKGDS1A	387	
520	11/11/2010 7:55	92	158	-66	512-BKGDS1A	387	
521	11/11/2010 7:55	124	158	-34	512-BKGDS1A	387	
522	11/11/2010 7:55	130	158	-28	512-BKGDS1A	387	
523	11/11/2010 7:55	97	158	-61	512-BKGDS1A	387	
524	11/11/2010 7:55	122	158	-36	512-BKGDS1A	387	
525	11/11/2010 7:55	128	158	-30	512-BKGDS1A	387	
526	11/11/2010 7:56	118	158	-40	512-BKGDS1A	387	
527	11/11/2010 7:56	158	158	0	512-BKGDS1A	387	
528	11/11/2010 7:56	144	158	-14	512-BKGDS1A	387	
529	11/11/2010 7:56	132	158	-26	512-BKGDS1A	387	
530	11/11/2010 7:56	136	158	-22	512-BKGDS1A	387	
531	11/11/2010 7:56	164	158	6	512-BKGDS1A	387	
532	11/11/2010 7:56	172	158	14	512-BKGDS1A	387	
533	11/11/2010 7:56	126	158	-32	512-BKGDS1A	387	
534	11/11/2010 7:56	132	158	-26	512-BKGDS1A	387	
535	11/11/2010 7:57	165	158	7	512-BKGDS1A	387	
536	11/11/2010 7:57	143	158	-15	512-BKGDS1A	387	
537	11/11/2010 7:57	127	158	-31	512-BKGDS1A	387	
538	11/11/2010 7:57	94	158	-64	512-BKGDS1A	387	
539	11/11/2010 7:57	109	158	-49	512-BKGDS1A	387	
540	11/11/2010 7:57	116	158	-42	512-BKGDS1A	387	
541	11/11/2010 7:57	128	158	-30	512-BKGDS1A	387	
542	11/11/2010 7:57	162	158	4	512-BKGDS1A	387	
543	11/11/2010 7:58	173	158	15	512-BKGDS1A	387	
544	11/11/2010 7:58	154	158	-4	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
545	11/11/2010 7:58	145	158	-13	512-BKGDS1A	387	
546	11/11/2010 7:58	136	158	-22	512-BKGDS1A	387	
547	11/11/2010 7:58	135	158	-23	512-BKGDS1A	387	
548	11/11/2010 7:58	131	158	-27	512-BKGDS1A	387	
549	11/11/2010 7:58	135	158	-23	512-BKGDS1A	387	
550	11/11/2010 7:58	148	158	-10	512-BKGDS1A	387	
551	11/11/2010 7:58	137	158	-21	512-BKGDS1A	387	
552	11/11/2010 7:59	128	158	-30	512-BKGDS1A	387	
553	11/11/2010 7:59	139	158	-19	512-BKGDS1A	387	
554	11/11/2010 7:59	127	158	-31	512-BKGDS1A	387	
555	11/11/2010 7:59	114	158	-44	512-BKGDS1A	387	
556	11/11/2010 7:59	143	158	-15	512-BKGDS1A	387	
557	11/11/2010 7:59	145	158	-13	512-BKGDS1A	387	
558	11/11/2010 7:59	122	158	-36	512-BKGDS1A	387	
559	11/11/2010 8:00	126	158	-32	512-BKGDS1A	387	
560	11/11/2010 8:00	100	158	-58	512-BKGDS1A	387	
561	11/11/2010 8:00	102	158	-56	512-BKGDS1A	387	
562	11/11/2010 8:00	129	158	-29	512-BKGDS1A	387	
563	11/11/2010 8:00	118	158	-40	512-BKGDS1A	387	
564	11/11/2010 8:00	116	158	-42	512-BKGDS1A	387	
565	11/11/2010 8:00	104	158	-54	512-BKGDS1A	387	
566	11/11/2010 8:01	146	158	-12	512-BKGDS1A	387	
567	11/11/2010 8:01	122	158	-36	512-BKGDS1A	387	
568	11/11/2010 8:01	128	158	-30	512-BKGDS1A	387	
569	11/11/2010 8:01	117	158	-41	512-BKGDS1A	387	
570	11/11/2010 8:01	119	158	-39	512-BKGDS1A	387	
571	11/11/2010 8:01	172	158	14	512-BKGDS1A	387	
572	11/11/2010 8:01	181	158	23	512-BKGDS1A	387	
573	11/11/2010 8:01	190	158	32	512-BKGDS1A	387	
574	11/11/2010 8:01	176	158	18	512-BKGDS1A	387	
575	11/11/2010 8:02	160	158	2	512-BKGDS1A	387	
576	11/11/2010 8:02	126	158	-32	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
577	11/11/2010 8:02	129	158	-29	512-BKGDS1A	387	
578	11/11/2010 8:02	154	158	-4	512-BKGDS1A	387	
579	11/11/2010 8:02	123	158	-35	512-BKGDS1A	387	
580	11/11/2010 8:02	127	158	-31	512-BKGDS1A	387	
581	11/11/2010 8:02	146	158	-12	512-BKGDS1A	387	
582	11/11/2010 8:02	124	158	-34	512-BKGDS1A	387	
583	11/11/2010 8:02	133	158	-25	512-BKGDS1A	387	
584	11/11/2010 8:03	131	158	-27	512-BKGDS1A	387	
585	11/11/2010 8:03	134	158	-24	512-BKGDS1A	387	
586	11/11/2010 8:03	137	158	-21	512-BKGDS1A	387	
587	11/11/2010 8:03	110	158	-48	512-BKGDS1A	387	
588	11/11/2010 8:03	136	158	-22	512-BKGDS1A	387	
589	11/11/2010 8:03	132	158	-26	512-BKGDS1A	387	
590	11/11/2010 8:03	143	158	-15	512-BKGDS1A	387	
591	11/11/2010 8:03	142	158	-16	512-BKGDS1A	387	
592	11/11/2010 8:04	156	158	-2	512-BKGDS1A	387	
593	11/11/2010 8:04	160	158	2	512-BKGDS1A	387	
594	11/11/2010 8:04	138	158	-20	512-BKGDS1A	387	
595	11/11/2010 8:04	127	158	-31	512-BKGDS1A	387	
596	11/11/2010 8:04	146	158	-12	512-BKGDS1A	387	
597	11/11/2010 8:04	158	158	0	512-BKGDS1A	387	
598	11/11/2010 8:04	142	158	-16	512-BKGDS1A	387	
599	11/11/2010 8:04	132	158	-26	512-BKGDS1A	387	
600	11/11/2010 8:04	133	158	-25	512-BKGDS1A	387	
601	11/11/2010 8:05	177	158	19	512-BKGDS1A	387	
602	11/11/2010 8:05	188	158	30	512-BKGDS1A	387	
603	11/11/2010 8:05	161	158	3	512-BKGDS1A	387	
604	11/11/2010 8:06	109	158	-49	512-BKGDS1A	387	
605	11/11/2010 8:06	117	158	-41	512-BKGDS1A	387	
606	11/11/2010 8:06	114	158	-44	512-BKGDS1A	387	
607	11/11/2010 8:06	135	158	-23	512-BKGDS1A	387	
608	11/11/2010 8:06	132	158	-26	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
609	11/11/2010 8:06	165	158	7	512-BKGDS1A	387	
610	11/11/2010 8:06	140	158	-18	512-BKGDS1A	387	
611	11/11/2010 8:06	108	158	-50	512-BKGDS1A	387	
612	11/11/2010 8:06	111	158	-47	512-BKGDS1A	387	
613	11/11/2010 8:07	125	158	-33	512-BKGDS1A	387	
614	11/11/2010 8:07	153	158	-5	512-BKGDS1A	387	
615	11/11/2010 8:07	144	158	-14	512-BKGDS1A	387	
616	11/11/2010 8:07	148	158	-10	512-BKGDS1A	387	
617	11/11/2010 8:07	115	158	-43	512-BKGDS1A	387	
618	11/11/2010 8:07	122	158	-36	512-BKGDS1A	387	
619	11/11/2010 8:07	117	158	-41	512-BKGDS1A	387	
620	11/11/2010 8:07	122	158	-36	512-BKGDS1A	387	
621	11/11/2010 8:08	148	158	-10	512-BKGDS1A	387	
622	11/11/2010 8:08	122	158	-36	512-BKGDS1A	387	
623	11/11/2010 8:08	119	158	-39	512-BKGDS1A	387	
624	11/11/2010 8:08	134	158	-24	512-BKGDS1A	387	
625	11/11/2010 8:08	133	158	-25	512-BKGDS1A	387	
626	11/11/2010 8:08	134	158	-24	512-BKGDS1A	387	
627	11/11/2010 8:08	150	158	-8	512-BKGDS1A	387	
628	11/11/2010 8:08	142	158	-16	512-BKGDS1A	387	
629	11/11/2010 8:08	122	158	-36	512-BKGDS1A	387	
630	11/11/2010 8:09	119	158	-39	512-BKGDS1A	387	
631	11/11/2010 8:09	152	158	-6	512-BKGDS1A	387	
632	11/11/2010 8:09	130	158	-28	512-BKGDS1A	387	
633	11/11/2010 8:09	127	158	-31	512-BKGDS1A	387	
634	11/11/2010 8:09	112	158	-46	512-BKGDS1A	387	
635	11/11/2010 8:09	133	158	-25	512-BKGDS1A	387	
636	11/11/2010 8:09	145	158	-13	512-BKGDS1A	387	
637	11/11/2010 8:09	117	158	-41	512-BKGDS1A	387	
638	11/11/2010 8:10	103	158	-55	512-BKGDS1A	387	
639	11/11/2010 8:10	136	158	-22	512-BKGDS1A	387	
640	11/11/2010 8:10	151	158	-7	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
641	11/11/2010 8:10	167	158	9	512-BKGDS1A	387	
642	11/11/2010 8:10	158	158	0	512-BKGDS1A	387	
643	11/11/2010 8:10	139	158	-19	512-BKGDS1A	387	
644	11/11/2010 8:10	127	158	-31	512-BKGDS1A	387	
645	11/11/2010 8:12	157	158	-1	512-BKGDS1A	387	
646	11/11/2010 8:12	123	158	-35	512-BKGDS1A	387	
647	11/11/2010 8:12	124	158	-34	512-BKGDS1A	387	
648	11/11/2010 8:13	121	158	-37	512-BKGDS1A	387	
649	11/11/2010 8:13	141	158	-17	512-BKGDS1A	387	
650	11/11/2010 8:13	148	158	-10	512-BKGDS1A	387	
651	11/11/2010 8:13	126	158	-32	512-BKGDS1A	387	
652	11/11/2010 8:13	149	158	-9	512-BKGDS1A	387	
653	11/11/2010 8:13	171	158	13	512-BKGDS1A	387	
654	11/11/2010 8:13	170	158	12	512-BKGDS1A	387	
655	11/11/2010 8:13	148	158	-10	512-BKGDS1A	387	
656	11/11/2010 8:13	143	158	-15	512-BKGDS1A	387	
657	11/11/2010 8:14	165	158	7	512-BKGDS1A	387	
658	11/11/2010 8:14	167	158	9	512-BKGDS1A	387	
659	11/11/2010 8:14	183	158	25	512-BKGDS1A	387	
660	11/11/2010 8:14	178	158	20	512-BKGDS1A	387	
661	11/11/2010 8:14	164	158	6	512-BKGDS1A	387	
662	11/11/2010 8:14	142	158	-16	512-BKGDS1A	387	
663	11/11/2010 8:14	137	158	-21	512-BKGDS1A	387	
664	11/11/2010 8:14	127	158	-31	512-BKGDS1A	387	
665	11/11/2010 8:15	116	158	-42	512-BKGDS1A	387	
666	11/11/2010 8:15	107	158	-51	512-BKGDS1A	387	
667	11/11/2010 8:15	118	158	-40	512-BKGDS1A	387	
668	11/11/2010 8:15	182	158	24	512-BKGDS1A	387	
669	11/11/2010 8:15	199	158	41	512-BKGDS1A	387	
670	11/11/2010 8:15	142	158	-16	512-BKGDS1A	387	
671	11/11/2010 8:15	108	158	-50	512-BKGDS1A	387	
672	11/11/2010 8:15	181	158	23	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
673	11/11/2010 8:15	163	158	5	512-BKGDS1A	387	
674	11/11/2010 8:16	132	158	-26	512-BKGDS1A	387	
675	11/11/2010 8:16	135	158	-23	512-BKGDS1A	387	
676	11/11/2010 8:16	118	158	-40	512-BKGDS1A	387	
677	11/11/2010 8:16	113	158	-45	512-BKGDS1A	387	
678	11/11/2010 8:16	149	158	-9	512-BKGDS1A	387	
679	11/11/2010 8:16	167	158	9	512-BKGDS1A	387	
680	11/11/2010 8:16	134	158	-24	512-BKGDS1A	387	
681	11/11/2010 8:16	160	158	2	512-BKGDS1A	387	
682	11/11/2010 8:16	166	158	8	512-BKGDS1A	387	
683	11/11/2010 8:17	146	158	-12	512-BKGDS1A	387	
684	11/11/2010 8:17	154	158	-4	512-BKGDS1A	387	
685	11/11/2010 8:17	151	158	-7	512-BKGDS1A	387	
686	11/11/2010 8:17	139	158	-19	512-BKGDS1A	387	
687	11/11/2010 8:17	168	158	10	512-BKGDS1A	387	
688	11/11/2010 8:17	165	158	7	512-BKGDS1A	387	
689	11/11/2010 8:19	105	158	-53	512-BKGDS1A	387	
690	11/11/2010 8:19	126	158	-32	512-BKGDS1A	387	
691	11/11/2010 8:19	98	158	-60	512-BKGDS1A	387	
692	11/11/2010 8:19	155	158	-3	512-BKGDS1A	387	
693	11/11/2010 8:19	148	158	-10	512-BKGDS1A	387	
694	11/11/2010 8:19	107	158	-51	512-BKGDS1A	387	
695	11/11/2010 8:19	117	158	-41	512-BKGDS1A	387	
696	11/11/2010 8:19	127	158	-31	512-BKGDS1A	387	
697	11/11/2010 8:20	101	158	-57	512-BKGDS1A	387	
698	11/11/2010 8:20	119	158	-39	512-BKGDS1A	387	
699	11/11/2010 8:20	106	158	-52	512-BKGDS1A	387	
700	11/11/2010 8:20	116	158	-42	512-BKGDS1A	387	
701	11/11/2010 8:20	104	158	-54	512-BKGDS1A	387	
702	11/11/2010 8:20	163	158	5	512-BKGDS1A	387	
703	11/11/2010 8:20	132	158	-26	512-BKGDS1A	387	
704	11/11/2010 8:20	131	158	-27	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
705	11/11/2010 8:20	134	158	-24	512-BKGDS1A	387	
706	11/11/2010 8:21	158	158	0	512-BKGDS1A	387	
707	11/11/2010 8:21	137	158	-21	512-BKGDS1A	387	
708	11/11/2010 8:21	116	158	-42	512-BKGDS1A	387	
709	11/11/2010 8:21	91	158	-67	512-BKGDS1A	387	
710	11/11/2010 8:21	170	158	12	512-BKGDS1A	387	
711	11/11/2010 8:21	169	158	11	512-BKGDS1A	387	
712	11/11/2010 8:21	128	158	-30	512-BKGDS1A	387	
713	11/11/2010 8:21	146	158	-12	512-BKGDS1A	387	
714	11/11/2010 8:21	120	158	-38	512-BKGDS1A	387	
715	11/11/2010 8:22	120	158	-38	512-BKGDS1A	387	
716	11/11/2010 8:22	127	158	-31	512-BKGDS1A	387	
717	11/11/2010 8:22	111	158	-47	512-BKGDS1A	387	
718	11/11/2010 8:22	92	158	-66	512-BKGDS1A	387	
719	11/11/2010 8:22	84	158	-74	512-BKGDS1A	387	
720	11/11/2010 8:22	97	158	-61	512-BKGDS1A	387	
721	11/11/2010 8:22	88	158	-70	512-BKGDS1A	387	
722	11/11/2010 8:22	130	158	-28	512-BKGDS1A	387	
723	11/11/2010 8:23	151	158	-7	512-BKGDS1A	387	
724	11/11/2010 8:23	131	158	-27	512-BKGDS1A	387	
725	11/11/2010 8:23	145	158	-13	512-BKGDS1A	387	
726	11/11/2010 8:23	123	158	-35	512-BKGDS1A	387	
727	11/11/2010 8:23	122	158	-36	512-BKGDS1A	387	
728	11/11/2010 8:23	135	158	-23	512-BKGDS1A	387	
729	11/11/2010 8:23	128	158	-30	512-BKGDS1A	387	
730	11/11/2010 8:23	94	158	-64	512-BKGDS1A	387	
731	11/11/2010 8:23	120	158	-38	512-BKGDS1A	387	
732	11/11/2010 8:39	162	158	4	512-BKGDS1A	387	
733	11/11/2010 8:39	132	158	-26	512-BKGDS1A	387	
734	11/11/2010 8:39	121	158	-37	512-BKGDS1A	387	
735	11/11/2010 8:39	131	158	-27	512-BKGDS1A	387	
736	11/11/2010 8:40	143	158	-15	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
737	11/11/2010 8:40	119	158	-39	512-BKGDS1A	387	
738	11/11/2010 8:40	128	158	-30	512-BKGDS1A	387	
739	11/11/2010 8:40	155	158	-3	512-BKGDS1A	387	
740	11/11/2010 8:40	165	158	7	512-BKGDS1A	387	
741	11/11/2010 8:40	177	158	19	512-BKGDS1A	387	
742	11/11/2010 8:40	177	158	19	512-BKGDS1A	387	
743	11/11/2010 8:40	187	158	29	512-BKGDS1A	387	
744	11/11/2010 8:40	212	158	54	512-BKGDS1A	387	
745	11/11/2010 8:41	176	158	18	512-BKGDS1A	387	
746	11/11/2010 8:41	170	158	12	512-BKGDS1A	387	
747	11/11/2010 8:41	137	158	-21	512-BKGDS1A	387	
748	11/11/2010 8:41	148	158	-10	512-BKGDS1A	387	
749	11/11/2010 8:41	158	158	0	512-BKGDS1A	387	
750	11/11/2010 8:41	199	158	41	512-BKGDS1A	387	
751	11/11/2010 8:41	175	158	17	512-BKGDS1A	387	
752	11/11/2010 8:41	161	158	3	512-BKGDS1A	387	
753	11/11/2010 8:42	170	158	12	512-BKGDS1A	387	
754	11/11/2010 8:42	169	158	11	512-BKGDS1A	387	
755	11/11/2010 8:42	203	158	45	512-BKGDS1A	387	
756	11/11/2010 8:42	154	158	-4	512-BKGDS1A	387	
757	11/11/2010 8:42	167	158	9	512-BKGDS1A	387	
758	11/11/2010 8:42	167	158	9	512-BKGDS1A	387	
759	11/11/2010 8:42	136	158	-22	512-BKGDS1A	387	
760	11/11/2010 8:42	126	158	-32	512-BKGDS1A	387	
761	11/11/2010 8:42	121	158	-37	512-BKGDS1A	387	
762	11/11/2010 8:43	174	158	16	512-BKGDS1A	387	
763	11/11/2010 8:43	176	158	18	512-BKGDS1A	387	
764	11/11/2010 8:43	137	158	-21	512-BKGDS1A	387	
765	11/11/2010 8:43	187	158	29	512-BKGDS1A	387	
766	11/11/2010 8:43	149	158	-9	512-BKGDS1A	387	
767	11/11/2010 8:43	163	158	5	512-BKGDS1A	387	
768	11/11/2010 8:43	184	158	26	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
769	11/11/2010 8:43	168	158	10	512-BKGDS1A	387	
770	11/11/2010 8:44	209	158	51	512-BKGDS1A	387	
771	11/11/2010 8:44	173	158	15	512-BKGDS1A	387	
772	11/11/2010 8:44	180	158	22	512-BKGDS1A	387	
773	11/11/2010 8:44	196	158	38	512-BKGDS1A	387	
774	11/11/2010 8:44	171	158	13	512-BKGDS1A	387	
775	11/11/2010 8:45	184	158	26	512-BKGDS1A	387	
776	11/11/2010 8:45	159	158	1	512-BKGDS1A	387	
777	11/11/2010 8:45	141	158	-17	512-BKGDS1A	387	
778	11/11/2010 8:45	194	158	36	512-BKGDS1A	387	
779	11/11/2010 8:45	131	158	-27	512-BKGDS1A	387	
780	11/11/2010 8:45	150	158	-8	512-BKGDS1A	387	
781	11/11/2010 8:45	158	158	0	512-BKGDS1A	387	
782	11/11/2010 8:46	137	158	-21	512-BKGDS1A	387	
783	11/11/2010 8:46	148	158	-10	512-BKGDS1A	387	
784	11/11/2010 8:46	159	158	1	512-BKGDS1A	387	
785	11/11/2010 8:46	148	158	-10	512-BKGDS1A	387	
786	11/11/2010 8:46	136	158	-22	512-BKGDS1A	387	
787	11/11/2010 8:46	135	158	-23	512-BKGDS1A	387	
788	11/11/2010 8:46	151	158	-7	512-BKGDS1A	387	
789	11/11/2010 8:46	161	158	3	512-BKGDS1A	387	
790	11/11/2010 8:46	209	158	51	512-BKGDS1A	387	
791	11/11/2010 8:47	166	158	8	512-BKGDS1A	387	
792	11/11/2010 8:47	174	158	16	512-BKGDS1A	387	
793	11/11/2010 8:47	181	158	23	512-BKGDS1A	387	
794	11/11/2010 8:47	174	158	16	512-BKGDS1A	387	
795	11/11/2010 8:47	164	158	6	512-BKGDS1A	387	
796	11/11/2010 8:47	105	158	-53	512-BKGDS1A	387	
797	11/11/2010 8:47	101	158	-57	512-BKGDS1A	387	
798	11/11/2010 8:47	156	158	-2	512-BKGDS1A	387	
799	11/11/2010 8:48	141	158	-17	512-BKGDS1A	387	
800	11/11/2010 8:48	103	158	-55	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
801	11/11/2010 8:48	117	158	-41	512-BKGDS1A	387	
802	11/11/2010 8:48	131	158	-27	512-BKGDS1A	387	
803	11/11/2010 8:48	142	158	-16	512-BKGDS1A	387	
804	11/11/2010 8:48	116	158	-42	512-BKGDS1A	387	
805	11/11/2010 8:48	117	158	-41	512-BKGDS1A	387	
806	11/11/2010 8:48	131	158	-27	512-BKGDS1A	387	
807	11/11/2010 8:48	145	158	-13	512-BKGDS1A	387	
808	11/11/2010 8:49	146	158	-12	512-BKGDS1A	387	
809	11/11/2010 8:49	156	158	-2	512-BKGDS1A	387	
810	11/11/2010 8:49	130	158	-28	512-BKGDS1A	387	
811	11/11/2010 8:49	169	158	11	512-BKGDS1A	387	
812	11/11/2010 8:49	182	158	24	512-BKGDS1A	387	
813	11/11/2010 8:49	152	158	-6	512-BKGDS1A	387	
814	11/11/2010 8:49	188	158	30	512-BKGDS1A	387	
815	11/11/2010 8:49	143	158	-15	512-BKGDS1A	387	
816	11/11/2010 8:50	108	158	-50	512-BKGDS1A	387	
817	11/11/2010 8:50	140	158	-18	512-BKGDS1A	387	
818	11/11/2010 9:19	202	158	44	512-BKGDS1A	387	
819	11/11/2010 9:19	172	158	14	512-BKGDS1A	387	
820	11/11/2010 9:19	193	158	35	512-BKGDS1A	387	
821	11/11/2010 9:20	189	158	31	512-BKGDS1A	387	
822	11/11/2010 9:20	209	158	51	512-BKGDS1A	387	
823	11/11/2010 9:20	199	158	41	512-BKGDS1A	387	
824	11/11/2010 9:20	191	158	33	512-BKGDS1A	387	
825	11/11/2010 9:20	208	158	50	512-BKGDS1A	387	
826	11/11/2010 9:20	186	158	28	512-BKGDS1A	387	
827	11/11/2010 9:20	168	158	10	512-BKGDS1A	387	
828	11/11/2010 9:20	183	158	25	512-BKGDS1A	387	
829	11/11/2010 9:21	167	158	9	512-BKGDS1A	387	
830	11/11/2010 9:21	171	158	13	512-BKGDS1A	387	
831	11/11/2010 9:21	179	158	21	512-BKGDS1A	387	
832	11/11/2010 9:21	203	158	45	512-BKGDS1A	387	



TETRA TECH EC, INC.
 Hunters Point Shipyard
 San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
833	11/11/2010 9:21	214	158	56	512-BKGDS1A	387	
834	11/11/2010 9:21	180	158	22	512-BKGDS1A	387	
835	11/11/2010 9:21	189	158	31	512-BKGDS1A	387	
836	11/11/2010 9:21	165	158	7	512-BKGDS1A	387	
837	11/11/2010 9:21	157	158	-1	512-BKGDS1A	387	
838	11/11/2010 9:22	142	158	-16	512-BKGDS1A	387	
839	11/11/2010 9:22	128	158	-30	512-BKGDS1A	387	
840	11/11/2010 9:22	139	158	-19	512-BKGDS1A	387	
841	11/11/2010 9:22	122	158	-36	512-BKGDS1A	387	
842	11/11/2010 9:22	128	158	-30	512-BKGDS1A	387	
843	11/11/2010 9:22	159	158	1	512-BKGDS1A	387	
844	11/11/2010 9:22	157	158	-1	512-BKGDS1A	387	
845	11/11/2010 9:22	198	158	40	512-BKGDS1A	387	
846	11/11/2010 9:23	210	158	52	512-BKGDS1A	387	
847	11/11/2010 9:23	153	158	-5	512-BKGDS1A	387	
848	11/11/2010 9:23	102	158	-56	512-BKGDS1A	387	
849	11/11/2010 9:23	139	158	-19	512-BKGDS1A	387	
850	11/11/2010 9:23	141	158	-17	512-BKGDS1A	387	
851	11/11/2010 9:23	149	158	-9	512-BKGDS1A	387	
852	11/11/2010 9:23	137	158	-21	512-BKGDS1A	387	
853	11/11/2010 9:23	115	158	-43	512-BKGDS1A	387	
854	11/11/2010 9:23	133	158	-25	512-BKGDS1A	387	
855	11/11/2010 9:24	164	158	6	512-BKGDS1A	387	
856	11/11/2010 9:24	153	158	-5	512-BKGDS1A	387	
857	11/11/2010 9:24	162	158	4	512-BKGDS1A	387	
858	11/11/2010 9:24	150	158	-8	512-BKGDS1A	387	
859	11/11/2010 9:24	120	158	-38	512-BKGDS1A	387	
860	11/11/2010 9:24	156	158	-2	512-BKGDS1A	387	
861	11/11/2010 9:25	186	158	28	512-BKGDS1A	387	
862	11/11/2010 9:25	159	158	1	512-BKGDS1A	387	
863	11/11/2010 9:25	169	158	11	512-BKGDS1A	387	
864	11/11/2010 9:25	142	158	-16	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
865	11/11/2010 9:25	158	158	0	512-BKGDS1A	387	
866	11/11/2010 9:25	116	158	-42	512-BKGDS1A	387	
867	11/11/2010 9:25	112	158	-46	512-BKGDS1A	387	
868	11/11/2010 9:26	113	158	-45	512-BKGDS1A	387	
869	11/11/2010 9:26	117	158	-41	512-BKGDS1A	387	
870	11/11/2010 9:26	114	158	-44	512-BKGDS1A	387	
871	11/11/2010 9:26	110	158	-48	512-BKGDS1A	387	
872	11/11/2010 9:26	116	158	-42	512-BKGDS1A	387	
873	11/11/2010 9:26	158	158	0	512-BKGDS1A	387	
874	11/11/2010 9:26	126	158	-32	512-BKGDS1A	387	
875	11/11/2010 9:26	110	158	-48	512-BKGDS1A	387	
876	11/11/2010 9:27	148	158	-10	512-BKGDS1A	387	
877	11/11/2010 9:27	160	158	2	512-BKGDS1A	387	
878	11/11/2010 9:27	131	158	-27	512-BKGDS1A	387	
879	11/11/2010 9:27	134	158	-24	512-BKGDS1A	387	
880	11/11/2010 9:27	122	158	-36	512-BKGDS1A	387	
881	11/11/2010 9:27	121	158	-37	512-BKGDS1A	387	
882	11/11/2010 9:27	116	158	-42	512-BKGDS1A	387	
883	11/11/2010 9:27	104	158	-54	512-BKGDS1A	387	
884	11/11/2010 9:27	109	158	-49	512-BKGDS1A	387	
885	11/11/2010 9:28	113	158	-45	512-BKGDS1A	387	
886	11/11/2010 9:28	118	158	-40	512-BKGDS1A	387	
887	11/11/2010 9:28	132	158	-26	512-BKGDS1A	387	
888	11/11/2010 9:28	150	158	-8	512-BKGDS1A	387	
889	11/11/2010 9:28	177	158	19	512-BKGDS1A	387	
890	11/11/2010 9:28	171	158	13	512-BKGDS1A	387	
891	11/11/2010 9:28	135	158	-23	512-BKGDS1A	387	
892	11/11/2010 9:28	150	158	-8	512-BKGDS1A	387	
893	11/11/2010 9:28	173	158	15	512-BKGDS1A	387	
894	11/11/2010 9:29	121	158	-37	512-BKGDS1A	387	
895	11/11/2010 9:29	136	158	-22	512-BKGDS1A	387	
896	11/11/2010 9:29	114	158	-44	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
897	11/11/2010 9:29	88	158	-70	512-BKGDS1A	387	
898	11/11/2010 9:29	144	158	-14	512-BKGDS1A	387	
899	11/11/2010 9:29	142	158	-16	512-BKGDS1A	387	
900	11/11/2010 9:29	146	158	-12	512-BKGDS1A	387	
901	11/11/2010 9:29	144	158	-14	512-BKGDS1A	387	
902	11/11/2010 9:30	154	158	-4	512-BKGDS1A	387	
903	11/11/2010 9:30	122	158	-36	512-BKGDS1A	387	
904	11/11/2010 9:30	124	158	-34	512-BKGDS1A	387	
905	11/11/2010 9:30	126	158	-32	512-BKGDS1A	387	
906	11/11/2010 9:31	111	158	-47	512-BKGDS1A	387	
907	11/11/2010 9:31	153	158	-5	512-BKGDS1A	387	
908	11/11/2010 9:31	185	158	27	512-BKGDS1A	387	
909	11/11/2010 9:31	166	158	8	512-BKGDS1A	387	
910	11/11/2010 9:31	189	158	31	512-BKGDS1A	387	
911	11/11/2010 9:31	139	158	-19	512-BKGDS1A	387	
912	11/11/2010 9:31	188	158	30	512-BKGDS1A	387	
913	11/11/2010 9:31	185	158	27	512-BKGDS1A	387	
914	11/11/2010 9:31	167	158	9	512-BKGDS1A	387	
915	11/11/2010 9:32	163	158	5	512-BKGDS1A	387	
916	11/11/2010 9:32	166	158	8	512-BKGDS1A	387	
917	11/11/2010 9:32	161	158	3	512-BKGDS1A	387	
918	11/11/2010 9:32	145	158	-13	512-BKGDS1A	387	
919	11/11/2010 9:32	160	158	2	512-BKGDS1A	387	
920	11/11/2010 9:32	126	158	-32	512-BKGDS1A	387	
921	11/11/2010 9:32	118	158	-40	512-BKGDS1A	387	
922	11/11/2010 9:32	162	158	4	512-BKGDS1A	387	
923	11/11/2010 9:33	143	158	-15	512-BKGDS1A	387	
924	11/11/2010 9:33	150	158	-8	512-BKGDS1A	387	
925	11/11/2010 9:33	118	158	-40	512-BKGDS1A	387	
926	11/11/2010 9:33	122	158	-36	512-BKGDS1A	387	
927	11/11/2010 9:33	171	158	13	512-BKGDS1A	387	
928	11/11/2010 9:33	140	158	-18	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
929	11/11/2010 9:33	120	158	-38	512-BKGD51A	387	
930	11/11/2010 9:33	120	158	-38	512-BKGD51A	387	
931	11/11/2010 9:33	136	158	-22	512-BKGD51A	387	
932	11/11/2010 9:34	128	158	-30	512-BKGD51A	387	
933	11/11/2010 9:34	115	158	-43	512-BKGD51A	387	
934	11/11/2010 9:34	136	158	-22	512-BKGD51A	387	
935	11/11/2010 9:34	167	158	9	512-BKGD51A	387	
936	11/11/2010 9:34	145	158	-13	512-BKGD51A	387	
937	11/11/2010 9:34	116	158	-42	512-BKGD51A	387	
938	11/11/2010 9:34	117	158	-41	512-BKGD51A	387	
939	11/11/2010 9:34	111	158	-47	512-BKGD51A	387	
940	11/11/2010 9:34	114	158	-44	512-BKGD51A	387	
941	11/11/2010 9:35	134	158	-24	512-BKGD51A	387	
942	11/11/2010 9:35	132	158	-26	512-BKGD51A	387	
943	11/11/2010 9:35	139	158	-19	512-BKGD51A	387	
944	11/11/2010 9:35	147	158	-11	512-BKGD51A	387	
945	11/11/2010 9:35	123	158	-35	512-BKGD51A	387	
946	11/11/2010 9:35	116	158	-42	512-BKGD51A	387	
947	11/11/2010 9:36	159	158	1	512-BKGD51A	387	
948	11/11/2010 9:36	123	158	-35	512-BKGD51A	387	
949	11/11/2010 9:36	122	158	-36	512-BKGD51A	387	
950	11/11/2010 9:36	145	158	-13	512-BKGD51A	387	
951	11/11/2010 9:37	98	158	-60	512-BKGD51A	387	
952	11/11/2010 9:37	106	158	-52	512-BKGD51A	387	
953	11/11/2010 9:37	123	158	-35	512-BKGD51A	387	
954	11/11/2010 9:37	161	158	3	512-BKGD51A	387	
955	11/11/2010 9:37	120	158	-38	512-BKGD51A	387	
956	11/11/2010 9:37	147	158	-11	512-BKGD51A	387	
957	11/11/2010 9:37	175	158	17	512-BKGD51A	387	
958	11/11/2010 9:37	141	158	-17	512-BKGD51A	387	
959	11/11/2010 9:37	139	158	-19	512-BKGD51A	387	
960	11/11/2010 9:38	140	158	-18	512-BKGD51A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
961	11/11/2010 9:38	143	158	-15	512-BKGDS1A	387	
962	11/11/2010 9:38	103	158	-55	512-BKGDS1A	387	
963	11/11/2010 9:38	142	158	-16	512-BKGDS1A	387	
964	11/11/2010 9:38	138	158	-20	512-BKGDS1A	387	
965	11/11/2010 9:38	144	158	-14	512-BKGDS1A	387	
966	11/11/2010 9:38	145	158	-13	512-BKGDS1A	387	
967	11/11/2010 9:38	126	158	-32	512-BKGDS1A	387	
968	11/11/2010 9:39	129	158	-29	512-BKGDS1A	387	
969	11/11/2010 9:39	129	158	-29	512-BKGDS1A	387	
970	11/11/2010 9:39	85	158	-73	512-BKGDS1A	387	
971	11/11/2010 9:39	111	158	-47	512-BKGDS1A	387	
972	11/11/2010 9:39	117	158	-41	512-BKGDS1A	387	
973	11/11/2010 9:39	128	158	-30	512-BKGDS1A	387	
974	11/11/2010 9:39	154	158	-4	512-BKGDS1A	387	
975	11/11/2010 9:39	145	158	-13	512-BKGDS1A	387	
976	11/11/2010 9:39	147	158	-11	512-BKGDS1A	387	
977	11/11/2010 9:40	116	158	-42	512-BKGDS1A	387	
978	11/11/2010 9:40	107	158	-51	512-BKGDS1A	387	
979	11/11/2010 9:40	116	158	-42	512-BKGDS1A	387	
980	11/11/2010 9:40	103	158	-55	512-BKGDS1A	387	
981	11/11/2010 9:40	145	158	-13	512-BKGDS1A	387	
982	11/11/2010 9:40	147	158	-11	512-BKGDS1A	387	
983	11/11/2010 9:40	137	158	-21	512-BKGDS1A	387	
984	11/11/2010 9:40	124	158	-34	512-BKGDS1A	387	
985	11/11/2010 9:41	113	158	-45	512-BKGDS1A	387	
986	11/11/2010 9:41	101	158	-57	512-BKGDS1A	387	
987	11/11/2010 9:41	113	158	-45	512-BKGDS1A	387	
988	11/11/2010 9:41	130	158	-28	512-BKGDS1A	387	
989	11/11/2010 9:41	118	158	-40	512-BKGDS1A	387	
990	11/11/2010 9:41	148	158	-10	512-BKGDS1A	387	
991	11/11/2010 9:42	124	158	-34	512-BKGDS1A	387	
992	11/11/2010 9:42	114	158	-44	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
993	11/11/2010 9:42	105	158	-53	512-BKGDS1A	387	
994	11/11/2010 9:42	106	158	-52	512-BKGDS1A	387	
995	11/11/2010 9:42	120	158	-38	512-BKGDS1A	387	
996	11/11/2010 9:42	143	158	-15	512-BKGDS1A	387	
997	11/11/2010 9:42	116	158	-42	512-BKGDS1A	387	
998	11/11/2010 9:42	115	158	-43	512-BKGDS1A	387	
999	11/11/2010 9:42	146	158	-12	512-BKGDS1A	387	
1000	11/11/2010 9:43	167	158	9	512-BKGDS1A	387	
1001	11/11/2010 9:43	112	158	-46	512-BKGDS1A	387	
1002	11/11/2010 9:43	100	158	-58	512-BKGDS1A	387	
1003	11/11/2010 9:43	153	158	-5	512-BKGDS1A	387	
1004	11/11/2010 9:43	157	158	-1	512-BKGDS1A	387	
1005	11/11/2010 9:43	129	158	-29	512-BKGDS1A	387	
1006	11/11/2010 9:43	102	158	-56	512-BKGDS1A	387	
1007	11/11/2010 9:43	129	158	-29	512-BKGDS1A	387	
1008	11/11/2010 9:44	96	158	-62	512-BKGDS1A	387	
1009	11/11/2010 9:44	126	158	-32	512-BKGDS1A	387	
1010	11/11/2010 9:44	133	158	-25	512-BKGDS1A	387	
1011	11/11/2010 9:44	181	158	23	512-BKGDS1A	387	
1012	11/11/2010 9:44	134	158	-24	512-BKGDS1A	387	
1013	11/11/2010 9:44	141	158	-17	512-BKGDS1A	387	
1014	11/11/2010 9:44	173	158	15	512-BKGDS1A	387	
1015	11/11/2010 9:44	149	158	-9	512-BKGDS1A	387	
1016	11/11/2010 9:44	133	158	-25	512-BKGDS1A	387	
1017	11/11/2010 9:45	148	158	-10	512-BKGDS1A	387	
1018	11/11/2010 9:45	117	158	-41	512-BKGDS1A	387	
1019	11/11/2010 9:45	108	158	-50	512-BKGDS1A	387	
1020	11/11/2010 9:45	134	158	-24	512-BKGDS1A	387	
1021	11/11/2010 9:45	167	158	9	512-BKGDS1A	387	
1022	11/11/2010 9:45	135	158	-23	512-BKGDS1A	387	
1023	11/11/2010 9:45	106	158	-52	512-BKGDS1A	387	
1024	11/11/2010 9:45	124	158	-34	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1025	11/11/2010 9:46	124	158	-34	512-BKGDS1A	387	
1026	11/11/2010 9:46	101	158	-57	512-BKGDS1A	387	
1027	11/11/2010 9:46	113	158	-45	512-BKGDS1A	387	
1028	11/11/2010 9:46	159	158	1	512-BKGDS1A	387	
1029	11/11/2010 9:46	150	158	-8	512-BKGDS1A	387	
1030	11/11/2010 9:46	164	158	6	512-BKGDS1A	387	
1031	11/11/2010 9:46	160	158	2	512-BKGDS1A	387	
1032	11/11/2010 9:46	172	158	14	512-BKGDS1A	387	
1033	11/11/2010 9:48	147	158	-11	512-BKGDS1A	387	
1034	11/11/2010 9:49	60	158	-98	512-BKGDS1A	387	
1035	11/11/2010 9:49	51	158	-107	512-BKGDS1A	387	
1036	11/11/2010 9:49	97	158	-61	512-BKGDS1A	387	
1037	11/11/2010 9:49	116	158	-42	512-BKGDS1A	387	
1038	11/11/2010 9:49	104	158	-54	512-BKGDS1A	387	
1039	11/11/2010 9:49	174	158	16	512-BKGDS1A	387	
1040	11/11/2010 9:50	144	158	-14	512-BKGDS1A	387	
1041	11/11/2010 9:50	155	158	-3	512-BKGDS1A	387	
1042	11/11/2010 9:50	152	158	-6	512-BKGDS1A	387	
1043	11/11/2010 9:50	122	158	-36	512-BKGDS1A	387	
1044	11/11/2010 9:50	134	158	-24	512-BKGDS1A	387	
1045	11/11/2010 9:50	150	158	-8	512-BKGDS1A	387	
1046	11/11/2010 9:50	203	158	45	512-BKGDS1A	387	
1047	11/11/2010 9:50	147	158	-11	512-BKGDS1A	387	
1048	11/11/2010 9:50	120	158	-38	512-BKGDS1A	387	
1049	11/11/2010 9:51	125	158	-33	512-BKGDS1A	387	
1050	11/11/2010 9:51	136	158	-22	512-BKGDS1A	387	
1051	11/11/2010 9:51	131	158	-27	512-BKGDS1A	387	
1052	11/11/2010 9:51	121	158	-37	512-BKGDS1A	387	
1053	11/11/2010 9:51	87	158	-71	512-BKGDS1A	387	
1054	11/11/2010 9:51	97	158	-61	512-BKGDS1A	387	
1055	11/11/2010 9:51	103	158	-55	512-BKGDS1A	387	
1056	11/11/2010 9:51	120	158	-38	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1057	11/11/2010 9:52	125	158	-33	512-BKGD51A	387	
1058	11/11/2010 9:52	127	158	-31	512-BKGD51A	387	
1059	11/11/2010 9:52	168	158	10	512-BKGD51A	387	
1060	11/11/2010 9:52	155	158	-3	512-BKGD51A	387	
1061	11/11/2010 9:52	175	158	17	512-BKGD51A	387	
1062	11/11/2010 9:52	146	158	-12	512-BKGD51A	387	
1063	11/11/2010 9:52	146	158	-12	512-BKGD51A	387	
1064	11/11/2010 9:52	146	158	-12	512-BKGD51A	387	
1065	11/11/2010 9:52	125	158	-33	512-BKGD51A	387	
1066	11/11/2010 9:53	131	158	-27	512-BKGD51A	387	
1067	11/11/2010 9:53	134	158	-24	512-BKGD51A	387	
1068	11/11/2010 9:53	159	158	1	512-BKGD51A	387	
1069	11/11/2010 9:53	150	158	-8	512-BKGD51A	387	
1070	11/11/2010 9:53	157	158	-1	512-BKGD51A	387	
1071	11/11/2010 9:53	135	158	-23	512-BKGD51A	387	
1072	11/11/2010 9:53	112	158	-46	512-BKGD51A	387	
1073	11/11/2010 9:53	128	158	-30	512-BKGD51A	387	
1074	11/11/2010 9:53	143	158	-15	512-BKGD51A	387	
1075	11/11/2010 9:54	127	158	-31	512-BKGD51A	387	
1076	11/11/2010 9:55	125	158	-33	512-BKGD51A	387	
1077	11/11/2010 9:55	130	158	-28	512-BKGD51A	387	
1078	11/11/2010 9:55	170	158	12	512-BKGD51A	387	
1079	11/11/2010 9:55	172	158	14	512-BKGD51A	387	
1080	11/11/2010 9:55	130	158	-28	512-BKGD51A	387	
1081	11/11/2010 9:55	134	158	-24	512-BKGD51A	387	
1082	11/11/2010 9:56	150	158	-8	512-BKGD51A	387	
1083	11/11/2010 9:56	159	158	1	512-BKGD51A	387	
1084	11/11/2010 9:56	135	158	-23	512-BKGD51A	387	
1085	11/11/2010 9:56	122	158	-36	512-BKGD51A	387	
1086	11/11/2010 9:56	154	158	-4	512-BKGD51A	387	
1087	11/11/2010 9:56	121	158	-37	512-BKGD51A	387	
1088	11/11/2010 9:56	156	158	-2	512-BKGD51A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1089	11/11/2010 9:56	165	158	7	512-BKGDS1A	387	
1090	11/11/2010 9:56	147	158	-11	512-BKGDS1A	387	
1091	11/11/2010 9:57	112	158	-46	512-BKGDS1A	387	
1092	11/11/2010 9:57	105	158	-53	512-BKGDS1A	387	
1093	11/11/2010 9:57	107	158	-51	512-BKGDS1A	387	
1094	11/11/2010 9:57	110	158	-48	512-BKGDS1A	387	
1095	11/11/2010 9:57	124	158	-34	512-BKGDS1A	387	
1096	11/11/2010 9:57	170	158	12	512-BKGDS1A	387	
1097	11/11/2010 9:57	136	158	-22	512-BKGDS1A	387	
1098	11/11/2010 9:57	149	158	-9	512-BKGDS1A	387	
1099	11/11/2010 9:57	137	158	-21	512-BKGDS1A	387	
1100	11/11/2010 9:58	125	158	-33	512-BKGDS1A	387	
1101	11/11/2010 9:58	176	158	18	512-BKGDS1A	387	
1102	11/11/2010 9:58	111	158	-47	512-BKGDS1A	387	
1103	11/11/2010 9:58	93	158	-65	512-BKGDS1A	387	
1104	11/11/2010 9:58	120	158	-38	512-BKGDS1A	387	
1105	11/11/2010 9:58	155	158	-3	512-BKGDS1A	387	
1106	11/11/2010 9:58	133	158	-25	512-BKGDS1A	387	
1107	11/11/2010 9:58	126	158	-32	512-BKGDS1A	387	
1108	11/11/2010 9:59	112	158	-46	512-BKGDS1A	387	
1109	11/11/2010 9:59	117	158	-41	512-BKGDS1A	387	
1110	11/11/2010 9:59	107	158	-51	512-BKGDS1A	387	
1111	11/11/2010 9:59	122	158	-36	512-BKGDS1A	387	
1112	11/11/2010 9:59	106	158	-52	512-BKGDS1A	387	
1113	11/11/2010 9:59	108	158	-50	512-BKGDS1A	387	
1114	11/11/2010 9:59	110	158	-48	512-BKGDS1A	387	
1115	11/11/2010 9:59	121	158	-37	512-BKGDS1A	387	
1116	11/11/2010 9:59	141	158	-17	512-BKGDS1A	387	
1117	11/11/2010 10:00	159	158	1	512-BKGDS1A	387	
1118	11/11/2010 10:00	130	158	-28	512-BKGDS1A	387	
1119	11/11/2010 10:01	113	158	-45	512-BKGDS1A	387	
1120	11/11/2010 10:01	112	158	-46	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1121	11/11/2010 10:01	157	158	-1	512-BKGDS1A	387	
1122	11/11/2010 10:01	150	158	-8	512-BKGDS1A	387	
1123	11/11/2010 10:01	134	158	-24	512-BKGDS1A	387	
1124	11/11/2010 10:02	128	158	-30	512-BKGDS1A	387	
1125	11/11/2010 10:02	145	158	-13	512-BKGDS1A	387	
1126	11/11/2010 10:02	119	158	-39	512-BKGDS1A	387	
1127	11/11/2010 10:02	144	158	-14	512-BKGDS1A	387	
1128	11/11/2010 10:02	124	158	-34	512-BKGDS1A	387	
1129	11/11/2010 10:02	156	158	-2	512-BKGDS1A	387	
1130	11/11/2010 10:02	156	158	-2	512-BKGDS1A	387	
1131	11/11/2010 10:02	139	158	-19	512-BKGDS1A	387	
1132	11/11/2010 10:02	176	158	18	512-BKGDS1A	387	
1133	11/11/2010 10:03	128	158	-30	512-BKGDS1A	387	
1134	11/11/2010 10:03	170	158	12	512-BKGDS1A	387	
1135	11/11/2010 10:03	150	158	-8	512-BKGDS1A	387	
1136	11/11/2010 10:03	148	158	-10	512-BKGDS1A	387	
1137	11/11/2010 10:03	129	158	-29	512-BKGDS1A	387	
1138	11/11/2010 10:03	142	158	-16	512-BKGDS1A	387	
1139	11/11/2010 10:03	153	158	-5	512-BKGDS1A	387	
1140	11/11/2010 10:03	222	158	64	512-BKGDS1A	387	
1141	11/11/2010 10:03	189	158	31	512-BKGDS1A	387	
1142	11/11/2010 10:04	185	158	27	512-BKGDS1A	387	
1143	11/11/2010 10:04	143	158	-15	512-BKGDS1A	387	
1144	11/11/2010 10:04	130	158	-28	512-BKGDS1A	387	
1145	11/11/2010 10:04	104	158	-54	512-BKGDS1A	387	
1146	11/11/2010 10:04	118	158	-40	512-BKGDS1A	387	
1147	11/11/2010 10:04	118	158	-40	512-BKGDS1A	387	
1148	11/11/2010 10:04	99	158	-59	512-BKGDS1A	387	
1149	11/11/2010 10:04	111	158	-47	512-BKGDS1A	387	
1150	11/11/2010 10:05	137	158	-21	512-BKGDS1A	387	
1151	11/11/2010 10:05	163	158	5	512-BKGDS1A	387	
1152	11/11/2010 10:05	142	158	-16	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1153	11/11/2010 10:05	142	158	-16	512-BKGDS1A	387	
1154	11/11/2010 10:05	155	158	-3	512-BKGDS1A	387	
1155	11/11/2010 10:05	124	158	-34	512-BKGDS1A	387	
1156	11/11/2010 10:05	97	158	-61	512-BKGDS1A	387	
1157	11/11/2010 10:05	102	158	-56	512-BKGDS1A	387	
1158	11/11/2010 10:05	111	158	-47	512-BKGDS1A	387	
1159	11/11/2010 10:06	98	158	-60	512-BKGDS1A	387	
1160	11/11/2010 10:06	105	158	-53	512-BKGDS1A	387	
1161	11/11/2010 10:06	128	158	-30	512-BKGDS1A	387	
1162	11/11/2010 10:19	195	158	37	512-BKGDS1A	387	
1163	11/11/2010 10:19	163	158	5	512-BKGDS1A	387	
1164	11/11/2010 10:19	169	158	11	512-BKGDS1A	387	
1165	11/11/2010 10:19	129	158	-29	512-BKGDS1A	387	
1166	11/11/2010 10:19	169	158	11	512-BKGDS1A	387	
1167	11/11/2010 10:19	163	158	5	512-BKGDS1A	387	
1168	11/11/2010 10:19	131	158	-27	512-BKGDS1A	387	
1169	11/11/2010 10:20	126	158	-32	512-BKGDS1A	387	
1170	11/11/2010 10:20	124	158	-34	512-BKGDS1A	387	
1171	11/11/2010 10:20	113	158	-45	512-BKGDS1A	387	
1172	11/11/2010 10:20	178	158	20	512-BKGDS1A	387	
1173	11/11/2010 10:20	126	158	-32	512-BKGDS1A	387	
1174	11/11/2010 10:20	123	158	-35	512-BKGDS1A	387	
1175	11/11/2010 10:20	150	158	-8	512-BKGDS1A	387	
1176	11/11/2010 10:20	160	158	2	512-BKGDS1A	387	
1177	11/11/2010 10:21	164	158	6	512-BKGDS1A	387	
1178	11/11/2010 10:21	186	158	28	512-BKGDS1A	387	
1179	11/11/2010 10:21	184	158	26	512-BKGDS1A	387	
1180	11/11/2010 10:21	176	158	18	512-BKGDS1A	387	
1181	11/11/2010 10:21	130	158	-28	512-BKGDS1A	387	
1182	11/11/2010 10:21	105	158	-53	512-BKGDS1A	387	
1183	11/11/2010 10:21	110	158	-48	512-BKGDS1A	387	
1184	11/11/2010 10:21	118	158	-40	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1185	11/11/2010 10:21	121	158	-37	512-BKGDS1A	387	
1186	11/11/2010 10:22	113	158	-45	512-BKGDS1A	387	
1187	11/11/2010 10:22	143	158	-15	512-BKGDS1A	387	
1188	11/11/2010 10:22	139	158	-19	512-BKGDS1A	387	
1189	11/11/2010 10:22	149	158	-9	512-BKGDS1A	387	
1190	11/11/2010 10:22	123	158	-35	512-BKGDS1A	387	
1191	11/11/2010 10:22	136	158	-22	512-BKGDS1A	387	
1192	11/11/2010 10:22	86	158	-72	512-BKGDS1A	387	
1193	11/11/2010 10:22	116	158	-42	512-BKGDS1A	387	
1194	11/11/2010 10:22	132	158	-26	512-BKGDS1A	387	
1195	11/11/2010 10:23	118	158	-40	512-BKGDS1A	387	
1196	11/11/2010 10:23	140	158	-18	512-BKGDS1A	387	
1197	11/11/2010 10:23	145	158	-13	512-BKGDS1A	387	
1198	11/11/2010 10:23	135	158	-23	512-BKGDS1A	387	
1199	11/11/2010 10:23	158	158	0	512-BKGDS1A	387	
1200	11/11/2010 10:23	143	158	-15	512-BKGDS1A	387	
1201	11/11/2010 10:23	124	158	-34	512-BKGDS1A	387	
1202	11/11/2010 10:23	86	158	-72	512-BKGDS1A	387	
1203	11/11/2010 10:24	120	158	-38	512-BKGDS1A	387	
1204	11/11/2010 10:24	135	158	-23	512-BKGDS1A	387	
1205	11/11/2010 10:25	131	158	-27	512-BKGDS1A	387	
1206	11/11/2010 10:25	97	158	-61	512-BKGDS1A	387	
1207	11/11/2010 10:25	84	158	-74	512-BKGDS1A	387	
1208	11/11/2010 10:26	83	158	-75	512-BKGDS1A	387	
1209	11/11/2010 10:26	122	158	-36	512-BKGDS1A	387	
1210	11/11/2010 10:26	119	158	-39	512-BKGDS1A	387	
1211	11/11/2010 10:26	151	158	-7	512-BKGDS1A	387	
1212	11/11/2010 10:26	171	158	13	512-BKGDS1A	387	
1213	11/11/2010 10:26	129	158	-29	512-BKGDS1A	387	
1214	11/11/2010 10:26	128	158	-30	512-BKGDS1A	387	
1215	11/11/2010 10:26	145	158	-13	512-BKGDS1A	387	
1216	11/11/2010 10:27	113	158	-45	512-BKGDS1A	387	



TETRA TECH EC, INC.
 Hunters Point Shipyard
 San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1217	11/11/2010 10:27	114	158	-44	512-BKGDS1A	387	
1218	11/11/2010 10:27	119	158	-39	512-BKGDS1A	387	
1219	11/11/2010 10:27	120	158	-38	512-BKGDS1A	387	
1220	11/11/2010 10:27	122	158	-36	512-BKGDS1A	387	
1221	11/11/2010 10:27	137	158	-21	512-BKGDS1A	387	
1222	11/11/2010 10:27	144	158	-14	512-BKGDS1A	387	
1223	11/11/2010 10:27	155	158	-3	512-BKGDS1A	387	
1224	11/11/2010 10:27	143	158	-15	512-BKGDS1A	387	
1225	11/11/2010 10:28	141	158	-17	512-BKGDS1A	387	
1226	11/11/2010 10:28	147	158	-11	512-BKGDS1A	387	
1227	11/11/2010 10:28	133	158	-25	512-BKGDS1A	387	
1228	11/11/2010 10:28	136	158	-22	512-BKGDS1A	387	
1229	11/11/2010 10:28	132	158	-26	512-BKGDS1A	387	
1230	11/11/2010 10:28	148	158	-10	512-BKGDS1A	387	
1231	11/11/2010 10:28	141	158	-17	512-BKGDS1A	387	
1232	11/11/2010 10:28	141	158	-17	512-BKGDS1A	387	
1233	11/11/2010 10:29	120	158	-38	512-BKGDS1A	387	
1234	11/11/2010 10:29	104	158	-54	512-BKGDS1A	387	
1235	11/11/2010 10:29	113	158	-45	512-BKGDS1A	387	
1236	11/11/2010 10:29	109	158	-49	512-BKGDS1A	387	
1237	11/11/2010 10:29	119	158	-39	512-BKGDS1A	387	
1238	11/11/2010 10:29	107	158	-51	512-BKGDS1A	387	
1239	11/11/2010 10:29	125	158	-33	512-BKGDS1A	387	
1240	11/11/2010 10:29	120	158	-38	512-BKGDS1A	387	
1241	11/11/2010 10:29	90	158	-68	512-BKGDS1A	387	
1242	11/11/2010 10:30	111	158	-47	512-BKGDS1A	387	
1243	11/11/2010 10:30	96	158	-62	512-BKGDS1A	387	
1244	11/11/2010 10:30	103	158	-55	512-BKGDS1A	387	
1245	11/11/2010 10:30	120	158	-38	512-BKGDS1A	387	
1246	11/11/2010 10:30	107	158	-51	512-BKGDS1A	387	
1247	11/11/2010 10:30	124	158	-34	512-BKGDS1A	387	
1248	11/11/2010 10:31	113	158	-45	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1249	11/11/2010 10:32	140	158	-18	512-BKGDS1A	387	
1250	11/11/2010 10:32	154	158	-4	512-BKGDS1A	387	
1251	11/11/2010 10:32	124	158	-34	512-BKGDS1A	387	
1252	11/11/2010 10:33	88	158	-70	512-BKGDS1A	387	
1253	11/11/2010 10:33	120	158	-38	512-BKGDS1A	387	
1254	11/11/2010 10:33	104	158	-54	512-BKGDS1A	387	
1255	11/11/2010 10:33	140	158	-18	512-BKGDS1A	387	
1256	11/11/2010 10:33	139	158	-19	512-BKGDS1A	387	
1257	11/11/2010 10:34	150	158	-8	512-BKGDS1A	387	
1258	11/11/2010 10:34	103	158	-55	512-BKGDS1A	387	
1259	11/11/2010 10:34	121	158	-37	512-BKGDS1A	387	
1260	11/11/2010 10:34	144	158	-14	512-BKGDS1A	387	
1261	11/11/2010 10:34	171	158	13	512-BKGDS1A	387	
1262	11/11/2010 10:34	176	158	18	512-BKGDS1A	387	
1263	11/11/2010 10:34	120	158	-38	512-BKGDS1A	387	
1264	11/11/2010 10:34	97	158	-61	512-BKGDS1A	387	
1265	11/11/2010 10:35	144	158	-14	512-BKGDS1A	387	
1266	11/11/2010 10:35	128	158	-30	512-BKGDS1A	387	
1267	11/11/2010 10:35	139	158	-19	512-BKGDS1A	387	
1268	11/11/2010 10:35	171	158	13	512-BKGDS1A	387	
1269	11/11/2010 10:35	157	158	-1	512-BKGDS1A	387	
1270	11/11/2010 10:35	146	158	-12	512-BKGDS1A	387	
1271	11/11/2010 10:35	135	158	-23	512-BKGDS1A	387	
1272	11/11/2010 10:35	112	158	-46	512-BKGDS1A	387	
1273	11/11/2010 10:35	117	158	-41	512-BKGDS1A	387	
1274	11/11/2010 10:36	109	158	-49	512-BKGDS1A	387	
1275	11/11/2010 10:36	133	158	-25	512-BKGDS1A	387	
1276	11/11/2010 10:36	139	158	-19	512-BKGDS1A	387	
1277	11/11/2010 10:36	101	158	-57	512-BKGDS1A	387	
1278	11/11/2010 10:36	115	158	-43	512-BKGDS1A	387	
1279	11/11/2010 10:36	116	158	-42	512-BKGDS1A	387	
1280	11/11/2010 10:36	120	158	-38	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1281	11/11/2010 10:36	113	158	-45	512-BKGDS1A	387	
1282	11/11/2010 10:36	109	158	-49	512-BKGDS1A	387	
1283	11/11/2010 10:37	101	158	-57	512-BKGDS1A	387	
1284	11/11/2010 10:37	107	158	-51	512-BKGDS1A	387	
1285	11/11/2010 10:37	135	158	-23	512-BKGDS1A	387	
1286	11/11/2010 10:37	119	158	-39	512-BKGDS1A	387	
1287	11/11/2010 10:37	158	158	0	512-BKGDS1A	387	
1288	11/11/2010 10:37	153	158	-5	512-BKGDS1A	387	
1289	11/11/2010 10:37	111	158	-47	512-BKGDS1A	387	
1290	11/11/2010 10:37	127	158	-31	512-BKGDS1A	387	
1291	11/11/2010 10:38	114	158	-44	512-BKGDS1A	387	
1292	11/11/2010 10:38	164	158	6	512-BKGDS1A	387	
1293	11/11/2010 10:38	150	158	-8	512-BKGDS1A	387	
1294	11/11/2010 10:38	165	158	7	512-BKGDS1A	387	
1295	11/11/2010 10:38	132	158	-26	512-BKGDS1A	387	
1296	11/11/2010 10:39	112	158	-46	512-BKGDS1A	387	
1297	11/11/2010 10:39	107	158	-51	512-BKGDS1A	387	
1298	11/11/2010 10:39	148	158	-10	512-BKGDS1A	387	
1299	11/11/2010 10:39	147	158	-11	512-BKGDS1A	387	
1300	11/11/2010 10:39	151	158	-7	512-BKGDS1A	387	
1301	11/11/2010 10:39	114	158	-44	512-BKGDS1A	387	
1302	11/11/2010 10:39	123	158	-35	512-BKGDS1A	387	
1303	11/11/2010 10:39	149	158	-9	512-BKGDS1A	387	
1304	11/11/2010 10:40	143	158	-15	512-BKGDS1A	387	
1305	11/11/2010 10:40	134	158	-24	512-BKGDS1A	387	
1306	11/11/2010 10:40	111	158	-47	512-BKGDS1A	387	
1307	11/11/2010 10:40	131	158	-27	512-BKGDS1A	387	
1308	11/11/2010 10:40	123	158	-35	512-BKGDS1A	387	
1309	11/11/2010 10:40	136	158	-22	512-BKGDS1A	387	
1310	11/11/2010 10:40	109	158	-49	512-BKGDS1A	387	
1311	11/11/2010 10:40	122	158	-36	512-BKGDS1A	387	
1312	11/11/2010 10:40	132	158	-26	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1313	11/11/2010 10:41	118	158	-40	512-BKGDS1A	387	
1314	11/11/2010 10:41	111	158	-47	512-BKGDS1A	387	
1315	11/11/2010 10:41	156	158	-2	512-BKGDS1A	387	
1316	11/11/2010 10:41	143	158	-15	512-BKGDS1A	387	
1317	11/11/2010 10:41	185	158	27	512-BKGDS1A	387	
1318	11/11/2010 10:41	125	158	-33	512-BKGDS1A	387	
1319	11/11/2010 10:41	125	158	-33	512-BKGDS1A	387	
1320	11/11/2010 10:41	123	158	-35	512-BKGDS1A	387	
1321	11/11/2010 10:41	120	158	-38	512-BKGDS1A	387	
1322	11/11/2010 10:42	111	158	-47	512-BKGDS1A	387	
1323	11/11/2010 10:42	101	158	-57	512-BKGDS1A	387	
1324	11/11/2010 10:42	113	158	-45	512-BKGDS1A	387	
1325	11/11/2010 10:42	113	158	-45	512-BKGDS1A	387	
1326	11/11/2010 10:42	104	158	-54	512-BKGDS1A	387	
1327	11/11/2010 10:42	116	158	-42	512-BKGDS1A	387	
1328	11/11/2010 10:42	117	158	-41	512-BKGDS1A	387	
1329	11/11/2010 10:42	84	158	-74	512-BKGDS1A	387	
1330	11/11/2010 10:43	117	158	-41	512-BKGDS1A	387	
1331	11/11/2010 10:43	112	158	-46	512-BKGDS1A	387	
1332	11/11/2010 10:43	112	158	-46	512-BKGDS1A	387	
1333	11/11/2010 10:43	97	158	-61	512-BKGDS1A	387	
1334	11/11/2010 10:44	145	158	-13	512-BKGDS1A	387	
1335	11/11/2010 10:44	123	158	-35	512-BKGDS1A	387	
1336	11/11/2010 10:44	129	158	-29	512-BKGDS1A	387	
1337	11/11/2010 10:44	125	158	-33	512-BKGDS1A	387	
1338	11/11/2010 10:44	115	158	-43	512-BKGDS1A	387	
1339	11/11/2010 10:44	119	158	-39	512-BKGDS1A	387	
1340	11/11/2010 10:44	98	158	-60	512-BKGDS1A	387	
1341	11/11/2010 10:45	132	158	-26	512-BKGDS1A	387	
1342	11/11/2010 10:45	158	158	0	512-BKGDS1A	387	
1343	11/11/2010 10:45	118	158	-40	512-BKGDS1A	387	
1344	11/11/2010 10:45	128	158	-30	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1345	11/11/2010 10:45	132	158	-26	512-BKGDS1A	387	
1346	11/11/2010 10:45	124	158	-34	512-BKGDS1A	387	
1347	11/11/2010 10:45	133	158	-25	512-BKGDS1A	387	
1348	11/11/2010 10:45	121	158	-37	512-BKGDS1A	387	
1349	11/11/2010 10:45	117	158	-41	512-BKGDS1A	387	
1350	11/11/2010 10:46	113	158	-45	512-BKGDS1A	387	
1351	11/11/2010 10:46	136	158	-22	512-BKGDS1A	387	
1352	11/11/2010 10:46	104	158	-54	512-BKGDS1A	387	
1353	11/11/2010 10:46	113	158	-45	512-BKGDS1A	387	
1354	11/11/2010 10:46	110	158	-48	512-BKGDS1A	387	
1355	11/11/2010 10:46	120	158	-38	512-BKGDS1A	387	
1356	11/11/2010 10:46	124	158	-34	512-BKGDS1A	387	
1357	11/11/2010 10:46	132	158	-26	512-BKGDS1A	387	
1358	11/11/2010 10:46	105	158	-53	512-BKGDS1A	387	
1359	11/11/2010 10:47	94	158	-64	512-BKGDS1A	387	
1360	11/11/2010 10:47	102	158	-56	512-BKGDS1A	387	
1361	11/11/2010 10:47	134	158	-24	512-BKGDS1A	387	
1362	11/11/2010 10:47	140	158	-18	512-BKGDS1A	387	
1363	11/11/2010 10:47	169	158	11	512-BKGDS1A	387	
1364	11/11/2010 10:47	144	158	-14	512-BKGDS1A	387	
1365	11/11/2010 10:47	130	158	-28	512-BKGDS1A	387	
1366	11/11/2010 10:47	131	158	-27	512-BKGDS1A	387	
1367	11/11/2010 10:48	98	158	-60	512-BKGDS1A	387	
1368	11/11/2010 10:48	109	158	-49	512-BKGDS1A	387	
1369	11/11/2010 10:48	130	158	-28	512-BKGDS1A	387	
1370	11/11/2010 10:48	137	158	-21	512-BKGDS1A	387	
1371	11/11/2010 10:48	137	158	-21	512-BKGDS1A	387	
1372	11/11/2010 10:48	118	158	-40	512-BKGDS1A	387	
1373	11/11/2010 10:48	177	158	19	512-BKGDS1A	387	
1374	11/11/2010 10:48	183	158	25	512-BKGDS1A	387	
1375	11/11/2010 10:48	135	158	-23	512-BKGDS1A	387	
1376	11/11/2010 10:49	142	158	-16	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1377	11/11/2010 10:49	129	158	-29	512-BKGD51A	387	
1378	11/11/2010 10:49	113	158	-45	512-BKGD51A	387	
1379	11/11/2010 10:50	101	158	-57	512-BKGD51A	387	
1380	11/11/2010 10:50	121	158	-37	512-BKGD51A	387	
1381	11/11/2010 10:50	122	158	-36	512-BKGD51A	387	
1382	11/11/2010 10:50	103	158	-55	512-BKGD51A	387	
1383	11/11/2010 10:50	78	158	-80	512-BKGD51A	387	
1384	11/11/2010 10:50	103	158	-55	512-BKGD51A	387	
1385	11/11/2010 10:50	107	158	-51	512-BKGD51A	387	
1386	11/11/2010 10:50	98	158	-60	512-BKGD51A	387	
1387	11/11/2010 10:51	119	158	-39	512-BKGD51A	387	
1388	11/11/2010 10:51	101	158	-57	512-BKGD51A	387	
1389	11/11/2010 10:51	101	158	-57	512-BKGD51A	387	
1390	11/11/2010 10:51	152	158	-6	512-BKGD51A	387	
1391	11/11/2010 10:51	132	158	-26	512-BKGD51A	387	
1392	11/11/2010 10:51	128	158	-30	512-BKGD51A	387	
1393	11/11/2010 10:51	141	158	-17	512-BKGD51A	387	
1394	11/11/2010 10:51	144	158	-14	512-BKGD51A	387	
1395	11/11/2010 10:51	142	158	-16	512-BKGD51A	387	
1396	11/11/2010 10:52	196	158	38	512-BKGD51A	387	
1397	11/11/2010 10:52	176	158	18	512-BKGD51A	387	
1398	11/11/2010 10:52	156	158	-2	512-BKGD51A	387	
1399	11/11/2010 10:52	114	158	-44	512-BKGD51A	387	
1400	11/11/2010 10:52	114	158	-44	512-BKGD51A	387	
1401	11/11/2010 10:52	147	158	-11	512-BKGD51A	387	
1402	11/11/2010 10:52	166	158	8	512-BKGD51A	387	
1403	11/11/2010 10:52	148	158	-10	512-BKGD51A	387	
1404	11/11/2010 10:52	147	158	-11	512-BKGD51A	387	
1405	11/11/2010 10:53	118	158	-40	512-BKGD51A	387	
1406	11/11/2010 10:53	140	158	-18	512-BKGD51A	387	
1407	11/11/2010 10:53	103	158	-55	512-BKGD51A	387	
1408	11/11/2010 10:53	123	158	-35	512-BKGD51A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1409	11/11/2010 10:53	162	158	4	512-BKGDS1A	387	
1410	11/11/2010 10:53	140	158	-18	512-BKGDS1A	387	
1411	11/11/2010 10:53	139	158	-19	512-BKGDS1A	387	
1412	11/11/2010 10:53	138	158	-20	512-BKGDS1A	387	
1413	11/11/2010 10:54	154	158	-4	512-BKGDS1A	387	
1414	11/11/2010 10:54	183	158	25	512-BKGDS1A	387	
1415	11/11/2010 10:54	157	158	-1	512-BKGDS1A	387	
1416	11/11/2010 10:54	173	158	15	512-BKGDS1A	387	
1417	11/11/2010 10:54	157	158	-1	512-BKGDS1A	387	
1418	11/11/2010 10:54	148	158	-10	512-BKGDS1A	387	
1419	11/11/2010 10:54	135	158	-23	512-BKGDS1A	387	
1420	11/11/2010 10:55	127	158	-31	512-BKGDS1A	387	
1421	11/11/2010 10:55	131	158	-27	512-BKGDS1A	387	
1422	11/11/2010 10:55	141	158	-17	512-BKGDS1A	387	
1423	11/11/2010 10:55	194	158	36	512-BKGDS1A	387	
1424	11/11/2010 10:55	136	158	-22	512-BKGDS1A	387	
1425	11/11/2010 10:55	108	158	-50	512-BKGDS1A	387	
1426	11/11/2010 10:55	139	158	-19	512-BKGDS1A	387	
1427	11/11/2010 10:55	104	158	-54	512-BKGDS1A	387	
1428	11/11/2010 10:56	84	158	-74	512-BKGDS1A	387	
1429	11/11/2010 10:56	81	158	-77	512-BKGDS1A	387	
1430	11/11/2010 10:56	120	158	-38	512-BKGDS1A	387	
1431	11/11/2010 10:56	129	158	-29	512-BKGDS1A	387	
1432	11/11/2010 10:56	142	158	-16	512-BKGDS1A	387	
1433	11/11/2010 10:56	117	158	-41	512-BKGDS1A	387	
1434	11/11/2010 10:56	101	158	-57	512-BKGDS1A	387	
1435	11/11/2010 10:56	113	158	-45	512-BKGDS1A	387	
1436	11/11/2010 10:56	130	158	-28	512-BKGDS1A	387	
1437	11/11/2010 10:57	123	158	-35	512-BKGDS1A	387	
1438	11/11/2010 10:57	145	158	-13	512-BKGDS1A	387	
1439	11/11/2010 10:57	98	158	-60	512-BKGDS1A	387	
1440	11/11/2010 10:57	109	158	-49	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1441	11/11/2010 10:57	101	158	-57	512-BKGDS1A	387	
1442	11/11/2010 10:57	128	158	-30	512-BKGDS1A	387	
1443	11/11/2010 10:57	132	158	-26	512-BKGDS1A	387	
1444	11/11/2010 10:57	124	158	-34	512-BKGDS1A	387	
1445	11/11/2010 10:58	124	158	-34	512-BKGDS1A	387	
1446	11/11/2010 10:58	118	158	-40	512-BKGDS1A	387	
1447	11/11/2010 10:58	130	158	-28	512-BKGDS1A	387	
1448	11/11/2010 10:58	129	158	-29	512-BKGDS1A	387	
1449	11/11/2010 10:58	102	158	-56	512-BKGDS1A	387	
1450	11/11/2010 10:58	148	158	-10	512-BKGDS1A	387	
1451	11/11/2010 10:58	150	158	-8	512-BKGDS1A	387	
1452	11/11/2010 10:58	114	158	-44	512-BKGDS1A	387	
1453	11/11/2010 10:58	124	158	-34	512-BKGDS1A	387	
1454	11/11/2010 10:59	97	158	-61	512-BKGDS1A	387	
1455	11/11/2010 10:59	117	158	-41	512-BKGDS1A	387	
1456	11/11/2010 10:59	113	158	-45	512-BKGDS1A	387	
1457	11/11/2010 10:59	99	158	-59	512-BKGDS1A	387	
1458	11/11/2010 10:59	136	158	-22	512-BKGDS1A	387	
1459	11/11/2010 10:59	131	158	-27	512-BKGDS1A	387	
1460	11/11/2010 10:59	97	158	-61	512-BKGDS1A	387	
1461	11/11/2010 10:59	76	158	-82	512-BKGDS1A	387	
1462	11/11/2010 11:00	110	158	-48	512-BKGDS1A	387	
1463	11/11/2010 11:00	150	158	-8	512-BKGDS1A	387	
1464	11/11/2010 11:00	140	158	-18	512-BKGDS1A	387	
1465	11/11/2010 11:00	141	158	-17	512-BKGDS1A	387	
1466	11/11/2010 11:00	146	158	-12	512-BKGDS1A	387	
1467	11/11/2010 11:00	129	158	-29	512-BKGDS1A	387	
1468	11/11/2010 11:00	126	158	-32	512-BKGDS1A	387	
1469	11/11/2010 11:01	135	158	-23	512-BKGDS1A	387	
1470	11/11/2010 11:01	148	158	-10	512-BKGDS1A	387	
1471	11/11/2010 11:01	129	158	-29	512-BKGDS1A	387	
1472	11/11/2010 11:01	160	158	2	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1473	11/11/2010 11:01	129	158	-29	512-BKGDS1A	387	
1474	11/11/2010 11:01	125	158	-33	512-BKGDS1A	387	
1475	11/11/2010 11:01	140	158	-18	512-BKGDS1A	387	
1476	11/11/2010 11:01	116	158	-42	512-BKGDS1A	387	
1477	11/11/2010 11:01	117	158	-41	512-BKGDS1A	387	
1478	11/11/2010 11:02	121	158	-37	512-BKGDS1A	387	
1479	11/11/2010 11:02	111	158	-47	512-BKGDS1A	387	
1480	11/11/2010 11:02	124	158	-34	512-BKGDS1A	387	
1481	11/11/2010 11:02	136	158	-22	512-BKGDS1A	387	
1482	11/11/2010 11:02	102	158	-56	512-BKGDS1A	387	
1483	11/11/2010 11:02	152	158	-6	512-BKGDS1A	387	
1484	11/11/2010 11:02	144	158	-14	512-BKGDS1A	387	
1485	11/11/2010 11:02	158	158	0	512-BKGDS1A	387	
1486	11/11/2010 11:03	149	158	-9	512-BKGDS1A	387	
1487	11/11/2010 11:03	141	158	-17	512-BKGDS1A	387	
1488	11/11/2010 11:03	124	158	-34	512-BKGDS1A	387	
1489	11/11/2010 11:03	152	158	-6	512-BKGDS1A	387	
1490	11/11/2010 11:03	123	158	-35	512-BKGDS1A	387	
1491	11/11/2010 11:03	124	158	-34	512-BKGDS1A	387	
1492	11/11/2010 11:03	135	158	-23	512-BKGDS1A	387	
1493	11/11/2010 11:03	112	158	-46	512-BKGDS1A	387	
1494	11/11/2010 11:03	131	158	-27	512-BKGDS1A	387	
1495	11/11/2010 11:04	105	158	-53	512-BKGDS1A	387	
1496	11/11/2010 11:04	118	158	-40	512-BKGDS1A	387	
1497	11/11/2010 11:04	109	158	-49	512-BKGDS1A	387	
1498	11/11/2010 11:04	110	158	-48	512-BKGDS1A	387	
1499	11/11/2010 11:04	120	158	-38	512-BKGDS1A	387	
1500	11/11/2010 11:04	97	158	-61	512-BKGDS1A	387	
1501	11/11/2010 11:04	114	158	-44	512-BKGDS1A	387	
1502	11/11/2010 11:04	97	158	-61	512-BKGDS1A	387	
1503	11/11/2010 11:05	95	158	-63	512-BKGDS1A	387	
1504	11/11/2010 11:05	85	158	-73	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1505	11/11/2010 11:05	113	158	-45	512-BKGDS1A	387	
1506	11/11/2010 11:05	111	158	-47	512-BKGDS1A	387	
1507	11/11/2010 11:05	116	158	-42	512-BKGDS1A	387	
1508	11/11/2010 11:05	108	158	-50	512-BKGDS1A	387	
1509	11/11/2010 11:06	122	158	-36	512-BKGDS1A	387	
1510	11/11/2010 11:06	119	158	-39	512-BKGDS1A	387	
1511	11/11/2010 11:06	130	158	-28	512-BKGDS1A	387	
1512	11/11/2010 11:06	138	158	-20	512-BKGDS1A	387	
1513	11/11/2010 11:06	129	158	-29	512-BKGDS1A	387	
1514	11/11/2010 11:06	109	158	-49	512-BKGDS1A	387	
1515	11/11/2010 11:06	119	158	-39	512-BKGDS1A	387	
1516	11/11/2010 11:06	150	158	-8	512-BKGDS1A	387	
1517	11/11/2010 11:07	147	158	-11	512-BKGDS1A	387	
1518	11/11/2010 11:07	170	158	12	512-BKGDS1A	387	
1519	11/11/2010 11:07	139	158	-19	512-BKGDS1A	387	
1520	11/11/2010 11:07	121	158	-37	512-BKGDS1A	387	
1521	11/11/2010 11:07	107	158	-51	512-BKGDS1A	387	
1522	11/11/2010 11:07	101	158	-57	512-BKGDS1A	387	
1523	11/11/2010 11:07	112	158	-46	512-BKGDS1A	387	
1524	11/11/2010 11:07	120	158	-38	512-BKGDS1A	387	
1525	11/11/2010 11:07	125	158	-33	512-BKGDS1A	387	
1526	11/11/2010 11:08	122	158	-36	512-BKGDS1A	387	
1527	11/11/2010 11:08	87	158	-71	512-BKGDS1A	387	
1528	11/11/2010 11:08	74	158	-84	512-BKGDS1A	387	
1529	11/11/2010 11:08	128	158	-30	512-BKGDS1A	387	
1530	11/11/2010 11:08	121	158	-37	512-BKGDS1A	387	
1531	11/11/2010 11:08	109	158	-49	512-BKGDS1A	387	
1532	11/11/2010 11:08	142	158	-16	512-BKGDS1A	387	
1533	11/11/2010 11:08	138	158	-20	512-BKGDS1A	387	
1534	11/11/2010 11:09	142	158	-16	512-BKGDS1A	387	
1535	11/11/2010 11:09	148	158	-10	512-BKGDS1A	387	
1536	11/11/2010 11:09	156	158	-2	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1537	11/11/2010 11:09	135	158	-23	512-BKGDS1A	387	
1538	11/11/2010 11:09	138	158	-20	512-BKGDS1A	387	
1539	11/11/2010 11:09	114	158	-44	512-BKGDS1A	387	
1540	11/11/2010 11:09	112	158	-46	512-BKGDS1A	387	
1541	11/11/2010 11:09	150	158	-8	512-BKGDS1A	387	
1542	11/11/2010 11:09	138	158	-20	512-BKGDS1A	387	
1543	11/11/2010 11:10	119	158	-39	512-BKGDS1A	387	
1544	11/11/2010 11:10	116	158	-42	512-BKGDS1A	387	
1545	11/11/2010 11:10	121	158	-37	512-BKGDS1A	387	
1546	11/11/2010 11:10	119	158	-39	512-BKGDS1A	387	
1547	11/11/2010 11:10	108	158	-50	512-BKGDS1A	387	
1548	11/11/2010 11:10	121	158	-37	512-BKGDS1A	387	
1549	11/11/2010 11:11	176	158	18	512-BKGDS1A	387	
1550	11/11/2010 11:11	145	158	-13	512-BKGDS1A	387	
1551	11/11/2010 11:11	121	158	-37	512-BKGDS1A	387	
1552	11/11/2010 11:11	119	158	-39	512-BKGDS1A	387	
1553	11/11/2010 11:11	121	158	-37	512-BKGDS1A	387	
1554	11/11/2010 11:11	108	158	-50	512-BKGDS1A	387	
1555	11/11/2010 11:14	115	158	-43	512-BKGDS1A	387	
1556	11/11/2010 11:14	170	158	12	512-BKGDS1A	387	
1557	11/11/2010 11:14	145	158	-13	512-BKGDS1A	387	
1558	11/11/2010 11:14	143	158	-15	512-BKGDS1A	387	
1559	11/11/2010 11:14	159	158	1	512-BKGDS1A	387	
1560	11/11/2010 11:14	143	158	-15	512-BKGDS1A	387	
1561	11/11/2010 11:14	117	158	-41	512-BKGDS1A	387	
1562	11/11/2010 11:14	111	158	-47	512-BKGDS1A	387	
1563	11/11/2010 11:15	143	158	-15	512-BKGDS1A	387	
1564	11/11/2010 11:15	97	158	-61	512-BKGDS1A	387	
1565	11/11/2010 11:15	87	158	-71	512-BKGDS1A	387	
1566	11/11/2010 11:15	81	158	-77	512-BKGDS1A	387	
1567	11/11/2010 11:15	80	158	-78	512-BKGDS1A	387	
1568	11/11/2010 11:15	86	158	-72	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1569	11/11/2010 11:15	122	158	-36	512-BKGDS1A	387	
1570	11/11/2010 11:15	136	158	-22	512-BKGDS1A	387	
1571	11/11/2010 11:15	129	158	-29	512-BKGDS1A	387	
1572	11/11/2010 11:16	80	158	-78	512-BKGDS1A	387	
1573	11/11/2010 11:16	121	158	-37	512-BKGDS1A	387	
1574	11/11/2010 11:16	81	158	-77	512-BKGDS1A	387	
1575	11/11/2010 11:16	100	158	-58	512-BKGDS1A	387	
1576	11/11/2010 11:16	85	158	-73	512-BKGDS1A	387	
1577	11/11/2010 11:16	107	158	-51	512-BKGDS1A	387	
1578	11/11/2010 11:16	108	158	-50	512-BKGDS1A	387	
1579	11/11/2010 11:16	137	158	-21	512-BKGDS1A	387	
1580	11/11/2010 11:17	122	158	-36	512-BKGDS1A	387	
1581	11/11/2010 11:17	101	158	-57	512-BKGDS1A	387	
1582	11/11/2010 11:17	140	158	-18	512-BKGDS1A	387	
1583	11/11/2010 11:17	151	158	-7	512-BKGDS1A	387	
1584	11/11/2010 11:17	169	158	11	512-BKGDS1A	387	
1585	11/11/2010 11:17	159	158	1	512-BKGDS1A	387	
1586	11/11/2010 11:17	158	158	0	512-BKGDS1A	387	
1587	11/11/2010 11:17	140	158	-18	512-BKGDS1A	387	
1588	11/11/2010 11:17	126	158	-32	512-BKGDS1A	387	
1589	11/11/2010 11:18	130	158	-28	512-BKGDS1A	387	
1590	11/11/2010 11:18	152	158	-6	512-BKGDS1A	387	
1591	11/11/2010 11:18	182	158	24	512-BKGDS1A	387	
1592	11/11/2010 11:32	155	158	-3	512-BKGDS1A	387	
1593	11/11/2010 11:32	163	158	5	512-BKGDS1A	387	
1594	11/11/2010 11:32	202	158	44	512-BKGDS1A	387	
1595	11/11/2010 11:32	213	158	55	512-BKGDS1A	387	
1596	11/11/2010 11:32	223	158	65	512-BKGDS1A	387	
1597	11/11/2010 11:33	167	158	9	512-BKGDS1A	387	
1598	11/11/2010 11:33	158	158	0	512-BKGDS1A	387	
1599	11/11/2010 11:33	117	158	-41	512-BKGDS1A	387	
1600	11/11/2010 11:33	103	158	-55	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1601	11/11/2010 11:33	89	158	-69	512-BKGDS1A	387	
1602	11/11/2010 11:33	132	158	-26	512-BKGDS1A	387	
1603	11/11/2010 11:34	115	158	-43	512-BKGDS1A	387	
1604	11/11/2010 11:34	119	158	-39	512-BKGDS1A	387	
1605	11/11/2010 11:34	110	158	-48	512-BKGDS1A	387	
1606	11/11/2010 11:34	111	158	-47	512-BKGDS1A	387	
1607	11/11/2010 11:34	101	158	-57	512-BKGDS1A	387	
1608	11/11/2010 11:34	109	158	-49	512-BKGDS1A	387	
1609	11/11/2010 11:34	117	158	-41	512-BKGDS1A	387	
1610	11/11/2010 11:34	122	158	-36	512-BKGDS1A	387	
1611	11/11/2010 11:34	102	158	-56	512-BKGDS1A	387	
1612	11/11/2010 11:35	115	158	-43	512-BKGDS1A	387	
1613	11/11/2010 11:35	103	158	-55	512-BKGDS1A	387	
1614	11/11/2010 11:35	155	158	-3	512-BKGDS1A	387	
1615	11/11/2010 11:35	149	158	-9	512-BKGDS1A	387	
1616	11/11/2010 11:35	136	158	-22	512-BKGDS1A	387	
1617	11/11/2010 11:35	116	158	-42	512-BKGDS1A	387	
1618	11/11/2010 11:35	133	158	-25	512-BKGDS1A	387	
1619	11/11/2010 11:35	126	158	-32	512-BKGDS1A	387	
1620	11/11/2010 11:36	129	158	-29	512-BKGDS1A	387	
1621	11/11/2010 11:36	117	158	-41	512-BKGDS1A	387	
1622	11/11/2010 11:36	88	158	-70	512-BKGDS1A	387	
1623	11/11/2010 11:36	149	158	-9	512-BKGDS1A	387	
1624	11/11/2010 11:36	131	158	-27	512-BKGDS1A	387	
1625	11/11/2010 11:36	124	158	-34	512-BKGDS1A	387	
1626	11/11/2010 11:36	117	158	-41	512-BKGDS1A	387	
1627	11/11/2010 11:36	90	158	-68	512-BKGDS1A	387	
1628	11/11/2010 11:36	86	158	-72	512-BKGDS1A	387	
1629	11/11/2010 11:37	70	158	-88	512-BKGDS1A	387	
1630	11/11/2010 11:37	96	158	-62	512-BKGDS1A	387	
1631	11/11/2010 11:37	102	158	-56	512-BKGDS1A	387	
1632	11/11/2010 11:37	154	158	-4	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1633	11/11/2010 11:37	104	158	-54	512-BKGDS1A	387	
1634	11/11/2010 11:37	111	158	-47	512-BKGDS1A	387	
1635	11/11/2010 11:38	151	158	-7	512-BKGDS1A	387	
1636	11/11/2010 11:38	147	158	-11	512-BKGDS1A	387	
1637	11/11/2010 11:38	124	158	-34	512-BKGDS1A	387	
1638	11/11/2010 11:38	132	158	-26	512-BKGDS1A	387	
1639	11/11/2010 11:38	119	158	-39	512-BKGDS1A	387	
1640	11/11/2010 11:38	109	158	-49	512-BKGDS1A	387	
1641	11/11/2010 11:38	123	158	-35	512-BKGDS1A	387	
1642	11/11/2010 11:38	89	158	-69	512-BKGDS1A	387	
1643	11/11/2010 11:38	108	158	-50	512-BKGDS1A	387	
1644	11/11/2010 11:39	109	158	-49	512-BKGDS1A	387	
1645	11/11/2010 11:39	126	158	-32	512-BKGDS1A	387	
1646	11/11/2010 11:39	137	158	-21	512-BKGDS1A	387	
1647	11/11/2010 11:39	156	158	-2	512-BKGDS1A	387	
1648	11/11/2010 11:39	108	158	-50	512-BKGDS1A	387	
1649	11/11/2010 11:39	164	158	6	512-BKGDS1A	387	
1650	11/11/2010 11:39	122	158	-36	512-BKGDS1A	387	
1651	11/11/2010 11:39	134	158	-24	512-BKGDS1A	387	
1652	11/11/2010 11:40	128	158	-30	512-BKGDS1A	387	
1653	11/11/2010 11:40	113	158	-45	512-BKGDS1A	387	
1654	11/11/2010 11:40	134	158	-24	512-BKGDS1A	387	
1655	11/11/2010 11:40	126	158	-32	512-BKGDS1A	387	
1656	11/11/2010 11:40	127	158	-31	512-BKGDS1A	387	
1657	11/11/2010 11:40	121	158	-37	512-BKGDS1A	387	
1658	11/11/2010 11:40	123	158	-35	512-BKGDS1A	387	
1659	11/11/2010 11:40	90	158	-68	512-BKGDS1A	387	
1660	11/11/2010 11:40	97	158	-61	512-BKGDS1A	387	
1661	11/11/2010 11:41	143	158	-15	512-BKGDS1A	387	
1662	11/11/2010 11:41	122	158	-36	512-BKGDS1A	387	
1663	11/11/2010 11:41	111	158	-47	512-BKGDS1A	387	
1664	11/11/2010 11:41	119	158	-39	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1665	11/11/2010 11:41	138	158	-20	512-BKGDS1A	387	
1666	11/11/2010 11:41	126	158	-32	512-BKGDS1A	387	
1667	11/11/2010 11:41	134	158	-24	512-BKGDS1A	387	
1668	11/11/2010 11:41	130	158	-28	512-BKGDS1A	387	
1669	11/11/2010 11:42	123	158	-35	512-BKGDS1A	387	
1670	11/11/2010 11:42	124	158	-34	512-BKGDS1A	387	
1671	11/11/2010 11:42	100	158	-58	512-BKGDS1A	387	
1672	11/11/2010 11:42	129	158	-29	512-BKGDS1A	387	
1673	11/11/2010 11:42	151	158	-7	512-BKGDS1A	387	
1674	11/11/2010 11:42	111	158	-47	512-BKGDS1A	387	
1675	11/11/2010 11:42	120	158	-38	512-BKGDS1A	387	
1676	11/11/2010 11:42	149	158	-9	512-BKGDS1A	387	
1677	11/11/2010 11:42	151	158	-7	512-BKGDS1A	387	
1678	11/11/2010 11:43	140	158	-18	512-BKGDS1A	387	
1679	11/11/2010 11:43	116	158	-42	512-BKGDS1A	387	
1680	11/11/2010 11:43	90	158	-68	512-BKGDS1A	387	
1681	11/11/2010 11:43	99	158	-59	512-BKGDS1A	387	
1682	11/11/2010 11:43	88	158	-70	512-BKGDS1A	387	
1683	11/11/2010 11:43	140	158	-18	512-BKGDS1A	387	
1684	11/11/2010 11:43	107	158	-51	512-BKGDS1A	387	
1685	11/11/2010 11:44	100	158	-58	512-BKGDS1A	387	
1686	11/11/2010 11:44	100	158	-58	512-BKGDS1A	387	
1687	11/11/2010 11:44	103	158	-55	512-BKGDS1A	387	
1688	11/11/2010 11:44	80	158	-78	512-BKGDS1A	387	
1689	11/11/2010 11:44	126	158	-32	512-BKGDS1A	387	
1690	11/11/2010 11:44	113	158	-45	512-BKGDS1A	387	
1691	11/11/2010 11:44	92	158	-66	512-BKGDS1A	387	
1692	11/11/2010 11:44	154	158	-4	512-BKGDS1A	387	
1693	11/11/2010 11:45	114	158	-44	512-BKGDS1A	387	
1694	11/11/2010 11:45	125	158	-33	512-BKGDS1A	387	
1695	11/11/2010 11:45	125	158	-33	512-BKGDS1A	387	
1696	11/11/2010 11:45	136	158	-22	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1697	11/11/2010 11:45	131	158	-27	512-BKGDS1A	387	
1698	11/11/2010 11:45	114	158	-44	512-BKGDS1A	387	
1699	11/11/2010 11:45	99	158	-59	512-BKGDS1A	387	
1700	11/11/2010 11:45	111	158	-47	512-BKGDS1A	387	
1701	11/11/2010 11:45	115	158	-43	512-BKGDS1A	387	
1702	11/11/2010 11:46	152	158	-6	512-BKGDS1A	387	
1703	11/11/2010 11:46	180	158	22	512-BKGDS1A	387	
1704	11/11/2010 11:46	161	158	3	512-BKGDS1A	387	
1705	11/11/2010 11:46	122	158	-36	512-BKGDS1A	387	
1706	11/11/2010 11:46	104	158	-54	512-BKGDS1A	387	
1707	11/11/2010 11:46	120	158	-38	512-BKGDS1A	387	
1708	11/11/2010 11:46	128	158	-30	512-BKGDS1A	387	
1709	11/11/2010 11:46	104	158	-54	512-BKGDS1A	387	
1710	11/11/2010 11:47	105	158	-53	512-BKGDS1A	387	
1711	11/11/2010 11:47	119	158	-39	512-BKGDS1A	387	
1712	11/11/2010 11:47	124	158	-34	512-BKGDS1A	387	
1713	11/11/2010 11:47	96	158	-62	512-BKGDS1A	387	
1714	11/11/2010 11:47	100	158	-58	512-BKGDS1A	387	
1715	11/11/2010 11:47	142	158	-16	512-BKGDS1A	387	
1716	11/11/2010 11:47	129	158	-29	512-BKGDS1A	387	
1717	11/11/2010 11:47	145	158	-13	512-BKGDS1A	387	
1718	11/11/2010 11:47	131	158	-27	512-BKGDS1A	387	
1719	11/11/2010 11:48	132	158	-26	512-BKGDS1A	387	
1720	11/11/2010 11:48	106	158	-52	512-BKGDS1A	387	
1721	11/11/2010 11:48	98	158	-60	512-BKGDS1A	387	
1722	11/11/2010 11:48	123	158	-35	512-BKGDS1A	387	
1723	11/11/2010 11:48	126	158	-32	512-BKGDS1A	387	
1724	11/11/2010 11:48	126	158	-32	512-BKGDS1A	387	
1725	11/11/2010 11:48	129	158	-29	512-BKGDS1A	387	
1726	11/11/2010 11:49	127	158	-31	512-BKGDS1A	387	
1727	11/11/2010 11:49	113	158	-45	512-BKGDS1A	387	
1728	11/11/2010 11:49	115	158	-43	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1729	11/11/2010 11:49	91	158	-67	512-BKGDS1A	387	
1730	11/11/2010 11:49	134	158	-24	512-BKGDS1A	387	
1731	11/11/2010 11:49	131	158	-27	512-BKGDS1A	387	
1732	11/11/2010 11:49	165	158	7	512-BKGDS1A	387	
1733	11/11/2010 11:49	157	158	-1	512-BKGDS1A	387	
1734	11/11/2010 11:49	140	158	-18	512-BKGDS1A	387	
1735	11/11/2010 11:50	104	158	-54	512-BKGDS1A	387	
1736	11/11/2010 11:50	110	158	-48	512-BKGDS1A	387	
1737	11/11/2010 11:50	145	158	-13	512-BKGDS1A	387	
1738	11/11/2010 11:50	141	158	-17	512-BKGDS1A	387	
1739	11/11/2010 11:50	136	158	-22	512-BKGDS1A	387	
1740	11/11/2010 11:50	131	158	-27	512-BKGDS1A	387	
1741	11/11/2010 11:50	103	158	-55	512-BKGDS1A	387	
1742	11/11/2010 11:50	141	158	-17	512-BKGDS1A	387	
1743	11/11/2010 11:51	161	158	3	512-BKGDS1A	387	
1744	11/11/2010 11:51	136	158	-22	512-BKGDS1A	387	
1745	11/11/2010 11:51	187	158	29	512-BKGDS1A	387	
1746	11/11/2010 11:51	158	158	0	512-BKGDS1A	387	
1747	11/11/2010 11:51	158	158	0	512-BKGDS1A	387	
1748	11/11/2010 11:51	145	158	-13	512-BKGDS1A	387	
1749	11/11/2010 11:51	110	158	-48	512-BKGDS1A	387	
1750	11/11/2010 11:51	98	158	-60	512-BKGDS1A	387	
1751	11/11/2010 11:51	87	158	-71	512-BKGDS1A	387	
1752	11/11/2010 11:52	126	158	-32	512-BKGDS1A	387	
1753	11/11/2010 11:52	137	158	-21	512-BKGDS1A	387	
1754	11/11/2010 11:52	88	158	-70	512-BKGDS1A	387	
1755	11/11/2010 11:52	91	158	-67	512-BKGDS1A	387	
1756	11/11/2010 11:52	102	158	-56	512-BKGDS1A	387	
1757	11/11/2010 11:52	145	158	-13	512-BKGDS1A	387	
1758	11/11/2010 11:52	142	158	-16	512-BKGDS1A	387	
1759	11/11/2010 11:52	139	158	-19	512-BKGDS1A	387	
1760	11/11/2010 11:52	118	158	-40	512-BKGDS1A	387	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1761	11/11/2010 11:53	122	158	-36	512-BKGDS1A	387	
1762	11/11/2010 11:53	155	158	-3	512-BKGDS1A	387	
1763	11/11/2010 11:53	140	158	-18	512-BKGDS1A	387	

Net Gamma cpm Min: -109
Summary Avg: -23
Max: 66
St Dev: 26

Readings > 3σ investigation level are highlighted in blue

* Background ID correlates to instrument reference area background identification number

Gamma measurements > 3σ investigation level are verified by 2360 beta measurements



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

2350 Identification #: 512

Instrument/Probe Type: 2350-1 / 20DT06

Instrument Serial #: 228695

Probe Serial #: 022006AE1

Calibration Due Date: 10/22/2011

Reference Area Background Identification #: 512-BKGDS1A Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	11/02/2010 8:19	162
2	11/02/2010 8:20	147
3	11/02/2010 8:22	160
4	11/02/2010 8:23	151
5	11/02/2010 8:25	138
6	11/02/2010 8:26	134
7	11/02/2010 8:28	127
8	11/02/2010 8:29	141
9	11/02/2010 8:30	152
10	11/02/2010 8:31	150
11	11/02/2010 8:32	120
12	11/02/2010 8:34	158
13	11/02/2010 8:35	122
14	11/02/2010 8:36	478
15	11/02/2010 8:38	141
16	11/02/2010 8:39	133
17	11/02/2010 8:40	147
18	11/02/2010 8:41	128
19	11/02/2010 8:42	138
20	11/02/2010 8:43	132

Gamma Mean Background (cpm): 158

Standard Deviation: 76

Gamma 3σ Investigation
Level (cpm): 387



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Exposure Rate Measurements

Page 1

Site Area: 707 Survey Unit: 17 Class: 1 Area: 907.33 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Instrument Model:	Model 19	Reference Area Background Identification #:	421-BKGDS1
Instrument Serial Number:	167145	Reference Area Background Location:	Parcel D-1 Reference
Instrument Calibration Due Date:	3/5/2011	Exposure Rate Background (μ R/hr):	5

Rdg #	Date	Exposure Rate (μ R/hr)	Comments
1	11/19/2010	7	
2	11/19/2010	7	
3	11/19/2010	6	
4	11/19/2010	7	
5	11/19/2010	7	
6	11/19/2010	6	
7	11/19/2010	7	
8	11/19/2010	8	
9	11/19/2010	8	
10	11/19/2010	7	
11	11/19/2010	8	
12	11/19/2010	7	
13	11/19/2010	6	
14	11/19/2010	8	
15	11/19/2010	7	
16	11/19/2010	6	
17	11/19/2010	7	
18	11/19/2010	7	
19	11/19/2010	6	
20	11/19/2010	7	
21	11/30/2010	7	
22	11/30/2010	7	
23	11/30/2010	8	
24	11/30/2010	8	
25	11/30/2010	8	
26	11/30/2010	7	
27	11/30/2010	6	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Exposure Rate Measurements

Page 2

Rdg #	Date	Exposure Rate (μ R/hr)	Comments
28	11/30/2010	7	
29	11/30/2010	8	
30	11/30/2010	8	
31	11/30/2010	8	
32	11/30/2010	7	
33	11/30/2010	8	
34	11/30/2010	8	
35	11/30/2010	8	
36	11/30/2010	8	
37	1/17/2011	6	
38	1/17/2011	5	
39	1/17/2011	6	
40	2/15/2011	5	
41	2/15/2011	5	

Instrument Model:	Model 19	Reference Area Background Identification #:	578-BKGDS1
Instrument Serial Number:	207505	Reference Area Background Location:	Parcel D-1 Reference
Instrument Calibration Due Date:	2/24/2012	Exposure Rate Background (μ R/hr):	5

Rdg #	Date	Exposure Rate (μ R/hr)	Comments
42	3/8/2011	6	
43	3/8/2011	6	
44	3/8/2011	6	
45	3/8/2011	6	
46	3/8/2011	6	
47	3/8/2011	6	
48	3/8/2011	6	
49	3/8/2011	6	
50	3/8/2011	6	
51	3/8/2011	6	
52	3/8/2011	6	
53	3/8/2011	6	
54	3/8/2011	6	
55	3/8/2011	4	



Rdg #	Date	Exposure Rate (μ R/hr)	Comments
56	3/8/2011	4	
57	3/8/2011	6	
58	3/8/2011	6	
59	3/8/2011	4	
60	3/8/2011	6	
61	3/8/2011	6	
62	5/6/2011	5	
63	5/6/2011	6	
64	6/8/2011	6	
65	6/8/2011	6	
66	6/8/2011	6	
67	6/8/2011	6	
68	6/8/2011	6	
69	6/8/2011	6	
70	6/8/2011	6	
71	6/8/2011	6	
72	6/8/2011	6	
73	6/8/2011	6	
74	6/8/2011	6	
75	6/8/2011	6	
76	6/8/2011	6	
77	6/8/2011	6	
78	6/8/2011	6	
79	6/8/2011	6	
80	6/8/2011	6	
81	6/8/2011	6	
82	6/8/2011	6	
83	6/8/2011	6	

Exposure Rate Min: 4.00
Summary (μ R/hr) Avg: 6.41
 Max: 8.00
 St Dev: 0.95



TET
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS01720

Project Name Radiological Building Survey		PO Number N/A		Project Information Section									
Project Location HUNTERS POINT		Project Number 3670-003		LABORATORY NAME ONSITE - NWT									
Sample Name J. Rolfe		Airbill Number N/A		LABORATORY ID									
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592											
SAMPLE_ID	DATE	TIME	CONTAINERS	LEVEL	TYPE	T A T	G A M M A S P E C	S R 9 0	A L P H A	COMMENTS	LOCATION	DEPTH START END	QC
03707-S0017-F001-01	11/19/2010	0730	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0017-F002-01	11/19/2010	0735	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0017-F003-01	11/19/2010	0740	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0017-F004-01	11/19/2010	0745	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	DUP			
03707-S0017-F005-01	11/19/2010	0750	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0017-F006-01	11/19/2010	0755	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0017-F007-01	11/19/2010	0800	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0017-F008-01	11/19/2010	0805	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0017-F009-01	11/19/2010	0810	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0017-F010-01	11/19/2010	0815	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0017-F011-01	11/19/2010	0820	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0017-F012-01	11/19/2010	0825	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				

Relinquished by: (signature) Company RSR		Received by: (signature) Company E.C. Schnoda	
Time 14:01		Time 14:01	
Date		Date	
Time		Time	
Relinquished by: (signature)		Received by: (signature)	
Date		Date	
Time		Time	
Company		Company	
SAMPLING COMMENTS BUILDING 707T BARE SWEET UNIT 17 SYSTEMATIC 1-20		LABORATORY INSTRUCTIONS/COMMENTS COMPOSITE DESCRIPTION SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY) TEMPERATURE: SAMPLE CONDITION: COOLER SEAL.	
PARCEL E			



TET
TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 01721

Project Name Radiological Building Survey	PO Number N/A	LABORATORY NAME ONSITE - NWT		Project Information Section									
Project Location HUNTERS POINT	Project Number 3670-003	LABORATORY ID											
Sampler Name J. Rolfe	Airbill Number N/A												
Project Chemist LISA BIENKOWSKI	Project Chemist Phone 949-756-7592												
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	G A M M A S P E C	S R 9 0	A L P H A	COMMENTS	LOCATION	DEPTH START END	QC
03707-S0017-F013-01	11/19/2010	0830	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0017-F014-01	11/19/2010	0835	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0017-F015-01	11/19/2010	0840	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0017-F016-01	11/19/2010	0845	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0017-F017-01	11/19/2010	0850	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0017-F018-01	11/19/2010	0925	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0017-F019-01	11/19/2010	0925	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0017-F020-01	11/19/2010	0940	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				

Relinquished by: (signature) J. Rolfe	Received by: (signature) E. Schnodda	LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS	
Company K S R S	Company LWT	COMPOSITE DESCRIPTION			
Relinquished by: (signature)	Received by: (signature)	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)		COOLER SEAL	
Company	Company	TEMPERATURE: SAMPLE CONDITION:			
Relinquished by: (signature)	Received by: (signature)				
Company	Company				



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS01749

Bays

Project Name Radiological Building Survey		PO Number N/A		Project Information Section								
Project Location HUNTERS POINT		Project Number 3670-003		LABORATORY NAME ONSITE - NWT								
Sampler Name J. Rolfe		Airbill Number N/A		LABORATORY ID [REDACTED]								
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592		COMMENTS								
SAMPLE ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	G A M M A S P E C	S R 9 0	A L P H A	LOCATION	DEPTH START END	QC
03707-S0017-F021-01	11/30/2010	0730	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
03707-S0017-F022-01	11/30/2010	0735	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
03707-S0017-F023-01	11/30/2010	0740	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
03707-S0017-F024-01	11/30/2010	0745	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
03707-S0017-F025-01	11/30/2010	0750	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
03707-S0017-F026-01	11/30/2010	0755	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
03707-S0017-F027-01	11/30/2010	0800	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
03707-S0017-F028-01	11/30/2010	0805	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
03707-S0017-F029-01	11/30/2010	0810	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
03707-S0017-F030-01	11/30/2010	0815	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
03707-S0017-F031-01	11/30/2010	0820	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
03707-S0017-F032-01	11/30/2010	0825	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>			

Relinquished by: [Signature]		Date 11-30-10		Received by: (signature) [Signature]	
Company RSRS		Time 15:28		Company NWT	
Relinquished by: (signature)		Date		Received by: (signature)	
Company		Time		Company	
Relinquished by: (signature)		Date		Received by: (signature)	
Company		Time		Company	

LABORATORY INSTRUCTIONS/COMMENTS 2. 2005 / 50 sample COMPOSITE DESCRIPTION		SAMPLING COMMENTS BUILDING 707 IS ANGLE SURVEY UNIT 17 BIASED 21-36	
SAMPLE CONDITION UPON RECEIPT FOR LABORATORY TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:			



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 01750

Bugs

Project Name Radiological Building Survey		PO Number N/A		LABORATORY NAME ONSITE - NWT		Project Information Section							
Project Location HUNTERS POINT		Project Number 3670-003		LABORATORY ID									
Sampler Name J. Rolfe		Airbill Number N/A											
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592											
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	G A M M A S P E C	S R 9 0	A L P H A	COMMENTS	LOCATION	DEPTH START END	QC
03707-S0017-F033-01	11/30/2010	0830	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0017-F034-01	11/30/2010	0835	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0017-F035-01	11/30/2010	0840	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
03707-S0017-F036-01	11/30/2010	0845	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				

Relinquished by: (signature) Jeff Rolfe	Date 11-30-10	Received by: (signature) [Signature]	LABORATORY INSTRUCTIONS/COMMENTS 2 bags / Sample	SAMPLING COMMENTS
Company RSRs	Time 15:28	Company NWT	COMPOSITE DESCRIPTION	
Relinquished by: (signature)	Date	Received by: (signature)		
Company	Time	Company	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY) TEMPERATURE SAMPLE CONDITION COOLER SEAL	
Relinquished by: (signature)	Date	Received by: (signature)		
Company	Time	Company		



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San Diego, CA 92101

Chain-of-Custody Record

BFS 01826

Project Name Radiological Building Survey		PO Number N/A		Project Number 3670-0003		Project Location HUNTERS POINT		Project Chemist LISA BIENKOWSKI		Project Information Section			
Sampler Name R. Zahensky		Airbill Number N/A		Project Chain of Custody Phone 949-756-7592		LABORATORY NAME ONSITE - RSRS		LABORATORY ID		Project Information Section			
SAMPLE_ID	DATE	TIME	LEVEL	TYPE	CONTAINERS	TYPE	TYPE	TYPE	TYPE	COMMENTS	LOCATION	DEPTH	QC
03707-S0017-F037-01	1/17/2011	1300	1	S	1	S	S	S	S			START	END
03707-S0017-F038-01	1/17/2011	1310	1	S	1	S	S	S	S				
03707-S0017-F039-01	1/17/2011	1320	1	S	1	S	S	S	S				

Relinquished by: (signature) Company RSR		Date 01-17-11		Received by: (signature) Company RSR		LABORATORY INSTRUCTIONS/COMMENTS 2 samples per I.O.		SAMPLING COMMENTS B707 TRIANGLE FSS SU-17 POST-REMEDIATION 57-39	
Relinquished by: (signature) Company		Time 15:34		Received by: (signature) Company		COMPOSITE DESCRIPTION			
Relinquished by: (signature) Company		Date		Received by: (signature) Company		SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY) TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:			
Relinquished by: (signature) Company		Time		Received by: (signature) Company					



TECH EC, INC.
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Chain-of-Custody Record

BFS 01857

Page 1 of 1

Bag 3

Project Name Radiological Building Survey		PO Number: N/A		LABORATORY NAME ON SITE - RSRs		Project Information Section	
Project Location HUNTERS POINT		Project Number 3670-0003		LABORATORY ID			
Sampler Name <i>R Zahensky</i>		Airbill Number N/A					
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592					
SAMPLE_ID	DATE	TIME	Caulainers	LEVEL	TYPE	T	QC
03707-S0017-F040-01	2/15/2011	1330	1		S	<input checked="" type="checkbox"/>	START END
03707-S0017-F041-01	2/15/2011	1340	1		S	<input checked="" type="checkbox"/>	

Relinquished by: (signature) <i>R Zahensky</i>	Date 2.15.11	Received by: (signature) <i>[Signature]</i>	LABORATORY INSTRUCTIONS/COMMENTS 2 days per sample	SAMPLING COMMENTS B707 TRIANGLE FSS SU-17 POST-REMEDIATION 4041
Company RSRS	Time 14:00	Company RSRS	COMPOSITE DESCRIPTION	
Relinquished by: (signature)	Date	Received by: (signature)	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY, TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:	
Company	Time	Company		
Relinquished by: (signature)	Date	Received by: (signature)		
Company	Time	Company		



TETRA TECH, INC.
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Chain-of-Custody Record

BFS 01910

Project Name Radiological Building Survey		PO Number N/A		LABORATORY NAME ONSITE - RSRs		Project Information Section	
Project Location HUNTERS POINT		Project Number 3670-0003		LABORATORY ID			
Sampler Name J. Rolfe		Airbill Number N/A					
Project Chemist LISA BIENKOWSKI		Project Contact Phone 949-756-7592					
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	START	END
03707-S0017-F042-01	3/8/2011	0815	1		S		
03707-S0017-F043-01	3/8/2011	0820	1		S		
03707-S0017-F044-01	3/8/2011	0825	1		S		
03707-S0017-F045-01	3/8/2011	0830	1		S		
03707-S0017-F046-01	3/8/2011	0835	1		S		
03707-S0017-F047-01	3/8/2011	0840	1		S		
03707-S0017-F048-01	3/8/2011	0845	1		S		
03707-S0017-F049-01	3/8/2011	0850	1		S		
03707-S0017-F050-01	3/8/2011	0900	1		S		
03707-S0017-F051-01	3/8/2011	0905	1		S		
03707-S0017-F052-01	3/8/2011	0930	1		S		
03707-S0017-F053-01	3/8/2011	0935	1		S		

Relinquished by: <i>[Signature]</i>		Received by: <i>[Signature]</i>	
Company: RSRs	Date: 3-8-11	Company: RSRs	Date: 3-8-11
Relinquished by: (signature)		Received by: (signature)	
Company	Date	Company	Date
Relinquished by: (signature)		Received by: (signature)	
Company	Date	Company	Date

LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS	
COMPOSITE DESCRIPTION		B767 TRANNGLE FSS	
SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)		SV-17	
TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:		SYSTEMATIC 42-61	



TETRA TECH EC, INC.
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San Diego, CA 92101

Chain-of-Custody Record

BFS 01911

Page 1 of 1

Project Name Radiological Building Survey		PO Number N/A		Project Information Section															
Project Location HUNTERS POINT		Project Number 3670-0003		LABORATORY NAME ONSITE - RSRs															
Sampler Name J. Polke		Airbill Number N/A		LABORATORY ID															
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592																	
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T	A	I	G	S	A	L	P	H	A	COMMENTS	LOCATION	DEPTH	QC
03707-S0017-F054-01	3/8/2011	0940	1		S														
03707-S0017-F055-01	3/8/2011	0945	1		S														
03707-S0017-F056-01	3/8/2011	0950	1		S														
03707-S0017-F057-01	3/8/2011	0955	1		S														
03707-S0017-F058-01	3/8/2011	1000	1		S														
03707-S0017-F059-01	3/8/2011	1005	1		S														
03707-S0017-F060-01	3/8/2011	1010	1		S														
03707-S0017-F061-01	3/8/2011	1015	1		S														

Relinquished by: (signature) J. Polke		Received by: (signature) [Signature]	
Company RSRS	Date 3-8-11	Company R-SRS	Date 15:48
Relinquished by: (signature)		Received by: (signature)	
Company	Date	Company	Date
Relinquished by: (signature)		Received by: (signature)	
Company	Date	Company	Date
LABORATORY INSTRUCTIONS/COMMENTS		COMPOSITE DESCRIPTION	
SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY) TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:		SAMPLING COMMENTS	



TETRA TECH EC, INC.
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San Diego, CA 92101

Chain-of-Custody Record

BFS 01960

Project Name Radiological Building Survey		PO Number N/A		G A M A S P E C		S R P H A		LABORATORY NAME ONSITE - RSRS		Project Information Section	
Project Location HUNTERS POINT		Project Number 3670-0003		AIRBILL NUMBER N/A		PROJECT CHEMIST PHONE 949-756-7592		LABORATORY ID			
Sampler Name <i>R. Zahorsky</i>	Project Chemist LISA BIENKOWSKI	DATE 5/6/2011	TIME 11:05	Containers 1	LEVEL	TYPE S	T A T	COMMENTS		LOCATION	SAMPLE ID
SAMPLE ID 03707-S0017-F062-01		5/6/2011	11:05	1		S					
03707-S0017-F063-01		5/6/2011	11:10	1		S					

Relinquished by: (signature) <i>R. Zahorsky</i>	Date 5-6-11	Received by: (signature) <i>R. Zahorsky</i>	LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS	
Company <i>R. Zahorsky</i>	Time 15:55	Company R. Zahorsky	COMPOSITE DESCRIPTION		B707 TELANUELE AREA SU-17 # 62-63 SQUAD POST - REMEDIATION	
Relinquished by: (signature)	Date	Received by: (signature)	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)			
Company	Time	Company	TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:			
Relinquished by: (signature)	Date	Received by: (signature)				
Company	Time	Company				



TETRA TECH EC, INC.
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San Diego, CA 92101

Chain-of-Custody Record

BFS 01990

Project Name Radiological Building Survey		PO Number N/A		G A S A L P H A		Project Information Section		
Project Location HUNTERS POINT		Project Number 3670-0003		G A S A L P H A		LABORATORY NAME ONSITE - RSRS		
Sampler Name J. Rolfe		Airbill Number N/A		G A S A L P H A		LABORATORY ID		
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592		G A S A L P H A				
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	COMMENTS	LOCATION	SAMPLE ID
03707-S0017-F064-01	6/8/2011	1030	1		S			
03707-S0017-F065-01	6/8/2011	1035	1		S			
03707-S0017-F066-01	6/8/2011	1040	1		S			
03707-S0017-F067-01	6/8/2011	1045	1		S			
03707-S0017-F068-01	6/8/2011	1050	1		S			
03707-S0017-F069-01	6/8/2011	1055	1		S			
03707-S0017-F070-01	6/8/2011	1100	1		S			
03707-S0017-F071-01	6/8/2011	1105	1		S			
03707-S0017-F072-01	6/8/2011	1110	1		S			
03707-S0017-F073-01	6/8/2011	1115	1		S			
03707-S0017-F074-01	6/8/2011	1120	1		S			
03707-S0017-F075-01	6/8/2011	1125	1		S			

Relinquished by: (signature) Company		Date	6-8-11	Received by: (signature) Company		LABORATORY INSTRUCTIONS/COMMENTS		LABORATORY COMMENTS	
Relinquished by: (signature) Company		Time	1345	Received by: (signature) Company		COMPOSITE DESCRIPTION		8707 TRANSFER AREA FSS SU-17 SYSTEMIC 64-83	
Relinquished by: (signature) Company		Date		Received by: (signature) Company		SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY) TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:			
Relinquished by: (signature) Company		Time		Received by: (signature) Company					
Relinquished by: (signature) Company		Date		Received by: (signature) Company					
Relinquished by: (signature) Company		Time		Received by: (signature) Company					



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San Diego, CA 92101

Chain-of-Custody Record

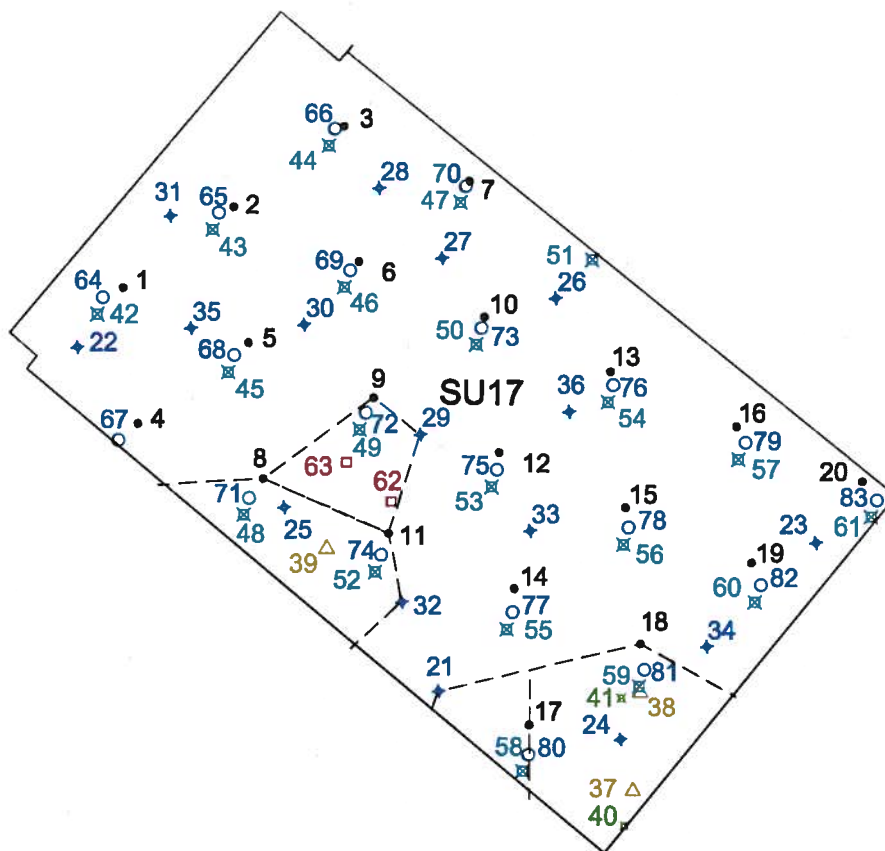
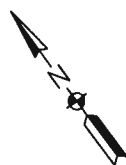
BFS 01991

Project Name Radiological Building Survey		PO Number N/A		G A L S R P A M 9 H M 0 A		LABORATORY NAME ONSITE - RSRS		Project Information Section	
Project Location HUNTERS POINT		Project Number 3670-0003		C A M A S P E C		LABORATORY ID			
Sampler Name J. Rolfe		Airbill Number N/A							
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592							
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	COMMENTS	LOCATION	SAMPLE ID
03707-S0017-F076-01	6/8/2011	1130	1		S	<input checked="" type="checkbox"/>			
03707-S0017-F077-01	6/8/2011	1135	1		S	<input checked="" type="checkbox"/>			
03707-S0017-F078-01	6/8/2011	1140	1		S	<input checked="" type="checkbox"/>			
03707-S0017-F079-01	6/8/2011	1145	1		S	<input checked="" type="checkbox"/>			
03707-S0017-F080-01	6/8/2011	1150	1		S	<input checked="" type="checkbox"/>			
03707-S0017-F081-01	6/8/2011	1155	1		S	<input checked="" type="checkbox"/>			
03707-S0017-F082-01	6/8/2011	1200	1		S	<input checked="" type="checkbox"/>	Dup		
03707-S0017-F083-01	6/8/2011	1205	1		S	<input checked="" type="checkbox"/>			

Relinquished by: (signature) J. Rolfe		Date 6-8-11	Received by: (signature) J. Rolfe	
Company RSRS		Time 1345	Company RSRS	
Relinquished by: (signature)		Date	Received by: (signature)	
Company		Time	Company	
Relinquished by: (signature)		Date	Received by: (signature)	
Company		Time	Company	

LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS	
COMPOSITE DESCRIPTION			
SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY TEMPERATURE, SAMPLE CONDITION, COOLER SEAL)			

P:\CTO-03 CAD FILES\DWG FILES\707 SURVEY UNITS\707_SURVEY _10-15-12.DWG
 PLOT/UPDATE: OCT 18 2012 13:26:08



LEGEND:

- 1 SYSTEMATIC 1 SAMPLES 1-20
- 21 BIASED SAMPLES 21-36
- △ 37 POST REMEDIATION 1 SAMPLES 37-39
- △ 40 POST REMEDIATION 2 SAMPLES 40-41
- 42 SYSTEMATIC 2 SAMPLES 42-61
- 62 Sr-90 REMEDIATION SAMPLES 62-63
- 64 SYSTEMATIC 3 SAMPLES 64-83
- PREVIOUS REMEDIATION

RECORD COPY

SCALE 1:30

HUNTERS POINT SHIPYARD
SAN FRANCISCO, CA
 P.O. BOX 884836
 SAN FRANCISCO, CA 94188

BUILDING 707
SURVEY UNIT 17



TETRA TECH EC, INC
 1230 COLUMBIA STREET, SUITE 750
 SAN DIEGO, CA 92101
 TEL: (619) 234-8690 FAX: (619) 234-8591



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel E and Utility Corridor 3 (UC3) Storm Drain and Sanitary Sewer Removal Action

Report Date: November 19, 2010	EMAC – CTO 03
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Overview

The HPS Team continued field activities in the Building 707 Triangle Area, Scrap Yard, UC3, and Work Areas #16, #21 and #22. Details of the work activities performed are provided in the sections below.

Building 707 Triangle Area

- The HPS Team performed Class 1 survey activities in Survey Unit 17. A total of 40 gamma static measurements were logged. The maximum gamma static measurements logged were 171 cpm for the FIDLER and 8,010 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPS Team performed Class 1 survey activities in Survey Unit 20. A total of 40 gamma static measurements were logged. The maximum gamma static measurements logged were 174 cpm for the FIDLER and 7,923 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPS Team performed Class 1 survey activities in Survey Unit 21. A total of 40 gamma static measurements were logged. The maximum gamma static measurements logged were 100 cpm for the FIDLER and 7,808 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPS Team issued drawings to identify locations for biased sample collection within Class 1 Survey Units 11 through 17 and 21.

Scrap Yard

- Following the receipt of analytical results from Survey Units 1, 2 and 3, the staged asphalt debris from Grids 2, 6, 8, 10, 12 and 14 were transferred to the recycling stockpile.

Parcel E/UC3 Storm Drain and Sanitary Sewer Removal Activities

- Soil compaction was performed by the HPS Team in those trench survey units with backfill activity in preparation for upcoming heavy rains.
- The HPS Team issued an updated Parcel E/UC1/UC3 Survey Unit Key Plan.
- A variety of housekeeping activities were performed throughout Parcel E and UC3 by the HPS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report
- Task-specific Plans approval



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel E and Utility Corridor 3 (UC3) Storm Drain and Sanitary Sewer Removal Action

Report Date: November 30, 2010

EMAC – CTO 03

Overview

The HPS Team continued field activities in the Building 707 Triangle Area, UC3, and Work Areas #16 and #21. Details of the work activities performed are provided in the sections below.

Building 707 Triangle Area

- The HPS Team performed Class 1 survey activities in Survey Unit 1. A total of 18 biased gamma static measurements were logged. The maximum biased gamma static measurements logged were 83 cpm for the FIDLER and 7,726 cpm. In addition, 9 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPS Team performed Class 1 survey activities in Survey Unit 6. A total of 10 biased gamma static measurements were logged. The maximum biased gamma static measurements logged were 91 cpm for the FIDLER and 7,608 cpm. In addition, 5 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPS Team performed Class 1 survey activities in Survey Unit 9. A total of 14 biased gamma static measurements were logged. The maximum biased gamma static measurements logged were 95 cpm for the FIDLER and 8,746 cpm. In addition, 7 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPS Team performed Class 1 survey activities in Survey Unit 10. A total of 20 biased gamma static measurements were logged. The maximum biased gamma static measurements logged were 190 cpm for the FIDLER and 8,419 cpm. In addition, 10 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPS Team performed Class 1 survey activities in Survey Unit 11. A total of 24 biased gamma static measurements were logged. The maximum biased gamma static measurements logged were 158 cpm for the FIDLER and 8,201 cpm. In addition, 12 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

- The HPS Team performed Class 1 survey activities in Survey Unit 17. A total of 32 biased gamma static measurements were logged. The maximum biased gamma static measurements logged were 220 cpm for the FIDLER and 9,743 cpm. In addition, 16 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

Parcel E/UC3 Storm Drain and Sanitary Sewer Removal Activities

- Backfilling activities were initiated for Trench Unit No. 183 by the HPS Team.
- The HPS Team provided the RASO with the Internal Draft SUPR for Trench Unit No. 187 along with a request for concurrence to backfill.
- A variety of housekeeping activities were performed throughout Parcel E and UC3 by the HPS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report
- Task-specific Plans approval



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel E and Utility Corridor 3 (UC3) Storm Drain and Sanitary Sewer Removal Action

Report Date: January 17, 2011	EMAC – CTO 03
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Overview

The HPS Team continued field activities in the Building 707 Triangle Area, UC3 and Work Areas #16 and #21. Details of the work activities performed are provided in the sections below.

Building 707 Triangle Area

- The HPS Team remediated approximately 90 cubic yards of soil from Survey Units 15, 16 and 17 and placed the material in LLRW bins BKRU025553G13, BKRU026385G14, GFLU001013G8, GFLU001059G15, GFLU001127G15, and GFLU001199G9 for disposal.
- The HPS Team performed Class 1 survey activities in Survey Unit 16. A total of 18 post-remediation gamma statics were logged. The maximum gamma static measurements logged were 73 cpm for the FIDLER and 7,830 cpm. In addition, nine post-remediation soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPS Team performed Class 1 survey activities in Survey Unit 17. A total of six post-remediation gamma statics were logged. The maximum gamma static measurements logged were 218 cpm for the FIDLER and 9,088 cpm. In addition, three post-remediation soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

Parcel E/UC3 Storm Drain and Sanitary Sewer Removal Activities

- Compaction testing was continued on recently backfilled areas of Trench Units No. 184 and 187. Based on the compaction testing results, backfill activities were continued for both trench survey units.
- A variety of housekeeping activities were performed throughout Parcel E and UC3 by the HPS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel E and Utility Corridor 3 (UC3) Storm Drain and Sanitary Sewer Removal Action

Report Date: February 15, 2011	EMAC – CTO 03
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Overview

The HPS Team continued field activities in the Building 707 Triangle Area, the Scrap Yard, Parcel UC3, and Work Areas #16, #20 and #21. Details of the work activities performed are provided in the sections below.

Building 707 Triangle Area

- The HPS Team remediated approximately 60 cubic yards of soil from Survey Units 5, 9, and 14 and placed the material in LLRW bins BKRU025603G15, GFLU001039G16, GFLU001139G8 and GFLU001233G5 for disposal.
- The HPS Team performed Class 1 survey activities in Survey Unit 16. A total of six post-remediation gamma static measurements were logged. The maximum gamma static measurements logged were 56 cpm (FIDLER) and 4,468 cpm. In addition, three soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data
- The HPS Team performed Class 1 survey activities in Survey Unit 17. A total of four characterization gamma static measurements were logged. The maximum gamma static measurements logged were 208 cpm (FIDLER) and 5,370 cpm. In addition, two soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data
- The HPS Team provided the RASO with the off-site strontium analytical results for the post-remediation samples collected from Survey Units 3, 5, 7, 9, 13, 14, 15, 20, and 21. No activity above the release criteria was identified.
- The HPS Team provided the RASO with the off-site strontium analytical results for the biased "pothole" samples collected from Survey Unit 4. No activity above the release criteria was identified.
- The HPS Team provided the RASO with the off-site strontium analytical results for the post-remediation samples collected from Survey Unit 16. The laboratory analytical results identified ⁹⁰Sr activity above the release criteria at Sample Point 33 (18.5 pCi/g).
- The HPS Team provided the RASO with the on-site and off-site analytical results for the post-remediation samples collected from Survey Unit 17. The analytical results

identified the presence of ^{90}Sr activity above the release criteria at Sample Point 37 (15.1 pCi/g).

- Staged asphalt debris excavated from Survey Units 10, 11 and 18 was transferred to the off-site recycling stockpiles near Building 411.
- The HPS Team issued record drawings to identify locations for post-remediation sample collection in Survey Unit 13.

Scrap Yard

- Staged asphalt debris from Survey Unit 6 was transferred to the recycling stockpiles near Building 411.

Parcel E/UC3 Storm Drain and Sanitary Sewer Removal Activities

- The HPS Team continued post-paving asphalt cleaning activities and continued preparations for road striping and traffic sign installation.
- A variety of housekeeping activities were performed throughout Parcel E and UC3 by the HPS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel E and Utility Corridor 3 (UC3) Storm Drain and Sanitary Sewer Removal Action

Report Date: March 8, 2011	EMAC – CTO 03
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Overview

The HPS Team continued field activities in the Building 707 Triangle Area, Parcel UC3, and Work Areas #16 and #21. Details of the work activities performed are provided in the sections below.

Building 707 Triangle Area

- The HPS Team performed survey activities in Survey Unit 9. A total of 40 systematic gamma static measurements were logged. The maximum measurements logged were 81 cpm (FIDLER) and 8,136 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPS Team performed survey activities in Survey Unit 17. A total of 40 systematic gamma static measurements were logged. The maximum measurements logged were 202 cpm (FIDLER) and 7,675 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPS Team provided the RASO with on-site analytical results for the post-remediation samples collected from Survey Unit 21. Because no activity above the release criteria was identified, systematic sample collection will be performed.
- The HPS Team issued drawings to identify systematic sample collection locations in Survey Unit 21.

Parcel E/UC3 Storm Drain and Sanitary Sewer Removal Activities

- A variety of housekeeping activities were performed throughout Parcels E and UC3 by the HPS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel E and Utility Corridor 3 (UC3) Storm Drain and Sanitary Sewer Removal Action

Report Date: May 6, 2011

EMAC – CTO 03

Overview

The HPS Team continued field activities in the Building 707 Triangle Area, Parcel UC3, and Work Areas #16 and #21. Details of the work activities performed are provided in the sections below.

Building 707 Triangle Area

- Approximately 7.5 cubic yards of soil was remediated from Survey Units 16 and 17 by the HPS Team and placed in LLRW bins BKRU012774G6, BKRU026398G13, and GFLU001221G8 for off-site disposal.
- The HPS Team logged a total of four post-remediation gamma static measurements in Survey Unit 16. The maximum measurements logged were 83 cpm (FIDLER) and 5,499 cpm. In addition, two soil samples were collected and submitted to the off-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPS Team logged four post-remediation gamma static measurements in Survey Unit 17. The maximum measurements logged were 209 cpm (FIDLER) and 8,228 cpm. In addition, two soil samples were collected and submitted to the off-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPS Team logged 42 investigative gamma static measurements in Survey Unit 19. The maximum measurements logged were 184 cpm (FIDLER) and 9,731 cpm. In addition, 21 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

Parcel E/UC3 Storm Drain and Sanitary Sewer Removal Activities

- A variety of housekeeping activities were performed throughout Parcels E and UC3 by the HPS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel E and Utility Corridor 3 (UC3) Storm Drain and Sanitary Sewer Removal Action

Report Date: June 8, 2011	EMAC – CTO 03
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Overview

The HPNS Team continued field activities in the Building 707 Triangle Area and Work Areas #16 and #21. Details of the work activities performed are provided in the sections below.

Building 707 Triangle Area

- The HPNS Team performed survey activities in Survey Unit 9. A total of 40 systematic gamma static measurements were logged. The maximum measurements logged were 88 cpm (FIDLER) and 6,758 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data
- The HPNS Team performed survey activities in Survey Unit 17. A total of 40 systematic gamma static measurements were logged. The maximum measurements logged were 180 cpm (FIDLER) and 6,993 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

Parcel E/UC3 Storm Drain and Sanitary Sewer Removal Activities

- A variety of housekeeping activities were performed throughout Parcels E and UC3 by the HPNS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report

Area	Survey Unit	Sample Point	Sample Type	Sample ID	Date Collected	COC Radiological Technician
707	17	54	Systematic	03707-S0017-F054-01	08-Mar-11	Jeff Rolfe
707	17	55	Systematic	03707-S0017-F055-01	08-Mar-11	Jeff Rolfe
707	17	56	Systematic	03707-S0017-F056-01	08-Mar-11	Jeff Rolfe
707	17	57	Systematic	03707-S0017-F057-01	08-Mar-11	Jeff Rolfe
707	17	58	Systematic	03707-S0017-F058-01	08-Mar-11	Jeff Rolfe
707	17	59	Systematic	03707-S0017-F059-01	08-Mar-11	Jeff Rolfe
707	17	60	Systematic	03707-S0017-F060-01	08-Mar-11	Jeff Rolfe
707	17	61	Systematic	03707-S0017-F061-01	08-Mar-11	Jeff Rolfe
707	17	62	Sr90 Remediation	03707-S0017-F062-01	06-May-11	Rick Zahensky
707	17	63	Sr90 Remediation	03707-S0017-F063-01	06-May-11	Rick Zahensky
707	17	64	Systematic	03707-S0017-F064-01	08-Jun-11	Jeff Rolfe
707	17	65	Systematic	03707-S0017-F065-01	08-Jun-11	Jeff Rolfe
707	17	66	Systematic	03707-S0017-F066-01	08-Jun-11	Jeff Rolfe
707	17	67	Systematic	03707-S0017-F067-01	08-Jun-11	Jeff Rolfe
707	17	68	Systematic	03707-S0017-F068-01	08-Jun-11	Jeff Rolfe
707	17	69	Systematic	03707-S0017-F069-01	08-Jun-11	Jeff Rolfe
707	17	70	Systematic	03707-S0017-F070-01	08-Jun-11	Jeff Rolfe
707	17	71	Systematic	03707-S0017-F071-01	08-Jun-11	Jeff Rolfe
707	17	72	Systematic	03707-S0017-F072-01	08-Jun-11	Jeff Rolfe
707	17	73	Systematic	03707-S0017-F073-01	08-Jun-11	Jeff Rolfe
707	17	74	Systematic	03707-S0017-F074-01	08-Jun-11	Jeff Rolfe
707	17	75	Systematic	03707-S0017-F075-01	08-Jun-11	Jeff Rolfe
707	17	76	Systematic	03707-S0017-F076-01	08-Jun-11	Jeff Rolfe
707	17	77	Systematic	03707-S0017-F077-01	08-Jun-11	Jeff Rolfe
707	17	78	Systematic	03707-S0017-F078-01	08-Jun-11	Jeff Rolfe
707	17	79	Systematic	03707-S0017-F079-01	08-Jun-11	Jeff Rolfe
707	17	80	Systematic	03707-S0017-F080-01	08-Jun-11	Jeff Rolfe
707	17	81	Systematic	03707-S0017-F081-01	08-Jun-11	Jeff Rolfe
707	17	82	Systematic	03707-S0017-F082-01	08-Jun-11	Jeff Rolfe
707	17	83	Systematic	03707-S0017-F083-01	08-Jun-11	Jeff Rolfe

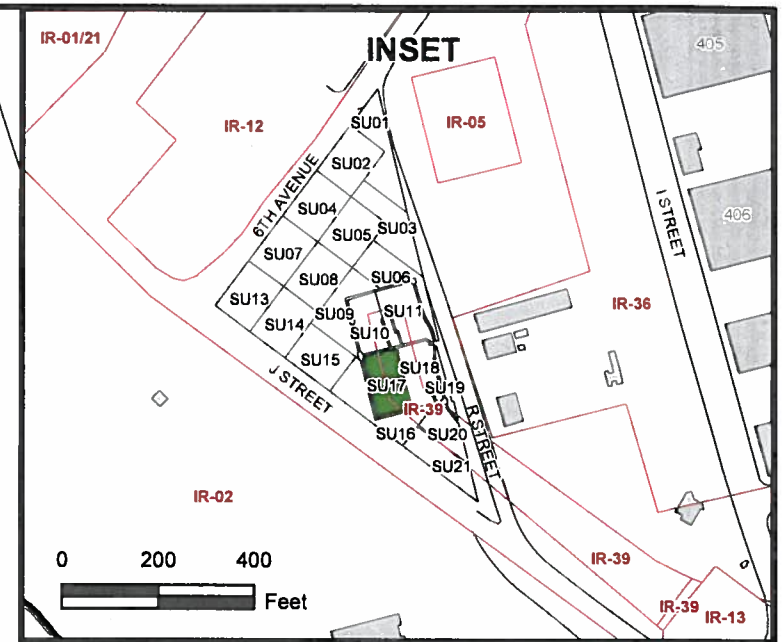
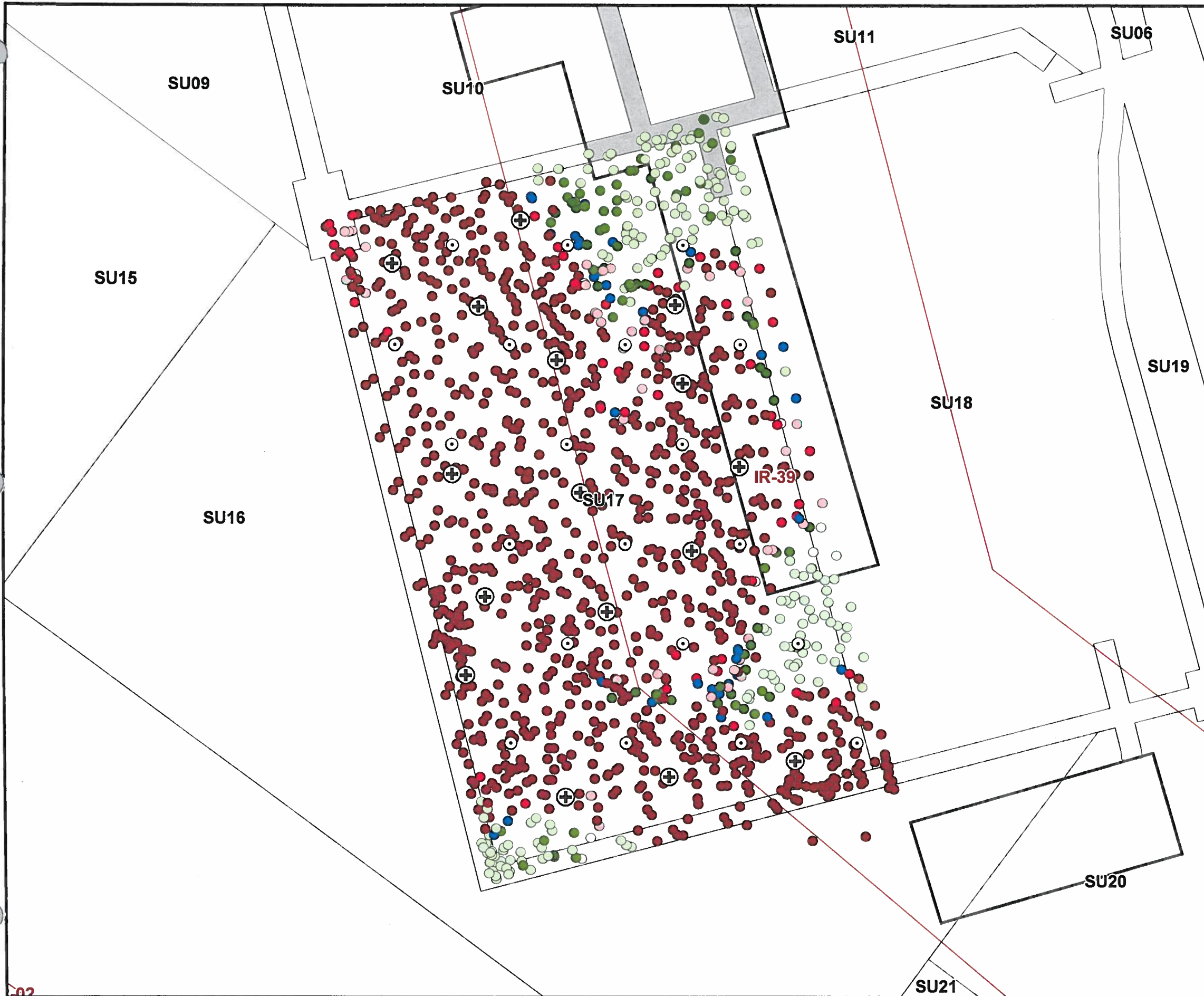
On-Site Laboratory (pCi/g)

K-40	Ra-226	Cs-137	Bi-214	Pb-214
11.79	0.6081	-0.006221	0.4122	0.4439
11.51	0.5153	0.00992	0.4029	0.2954
10.85	0.777	-0.01197	0.4008	0.4229
11.71	0.5384	0	0.4535	0.4568
10.66	1.099	0.01097	0.2278	0.3329
9.83	0.2524	-0.00007019	0.3211	0.3636
10.28	0.4147	0	0.354	0.3775
8.807	0.4218	-0.003131	0.3824	0.3614
4.862	0.436	-0.005611	0.1403	0.21
6.23	0.5965	0	0.2959	0.1526
5.821	0.1404	0.003488	0.2556	0.1834
4.624	0.3343	0	0.1111	0.2471
5.648	0.3461	-0.003752	0.2735	0.2699
5.595	0.2589	-0.002401	0.19	0.1767
4.363	0.0645	0.00159	0.1275	0.2811
5.183	0.6115	0	0.2073	0.2913
5.676	0.577	-0.01196	0.2672	0.1481
5.811	0.465	0	0.2357	0.2275
4.118	0.316	0	0.2288	0.2564
6.012	0.7396	0	0.1016	0.1509
4.893	0.02696	0	0.1565	0.2241
5.737	0.3798	-0.008098	0.1745	0.1254
5.904	0.463	-0.007242	0.08165	0.1895
6.726	0.504	-0.00686	0.1484	0.1773
5.787	0.4051	0.0004447	0.1673	0.1405
4.51	0.7243	-0.003767	0.239	0.1895
5.955	0.5374	0.001496	0.1092	0.2566
5.449	0.6041	-0.002971	0.2936	0.1314

Off-Site Laboratory (pCi/g)

K-40	Ra-226	Cs-137	Bi-214	Pb-214
7.81	0.599	-0.017	0.599	0.564
10	0.528	0.0122	0.528	0.65
10.4	0.426	-0.000619	0.426	0.482
9.88	0.514	0.0388	0.514	0.444
9.3	0.52	0	0.52	0.551
9.27	0.462	0.00335	0.462	0.593
10.8	0.414	-0.044	0.414	0.419
10.3	0.468	-0.0173	0.468	0.601
5.22	0.341	-0.000143	0.341	0.27
5.46	0.285	-0.0193	0.285	0.232
5.14	0.32	-0.000153	0.32	0.264
5.06	0.347	0.00617	0.347	0.17
4.66	0.38	0.000492	0.38	0.381
4.38	0.513	-0.0272	0.513	0.391
4.55	0.295	-0.0114	0.295	0.391
5.36	0.32	0.00414	0.32	0.212
3.69	0.343	0.00454	0.343	0.354
4.35	0.389	0.0188	0.389	0.374
3.45	0.231	-0.0259	0.231	0.383
6.31	0.327	0.00646	0.327	0.372
5.17	0.291	0	0.291	0.321
3.69	0.291	0.00166	0.291	0.305
5.13	0.292	0.0109	0.292	0.345
5.55	0.348	-0.0187	0.348	0.433
7.61	0.328	0.0109	0.328	0.392
5.16	0.328	-0.00678	0.328	0.428
4.04	0.395	0	0.395	0.122
7.01	0.349	-0.00733	0.349	0.393

Highlighted Activities: Ra-226 ≥ 1.633 (On-site) & 1.375 (Off-site) ; Cs-137 ≥ 0.113 ; Bi-214 ≥ 1.485 ; Pb-214 ≥ 1.485 (pCi/g)




LEGEND

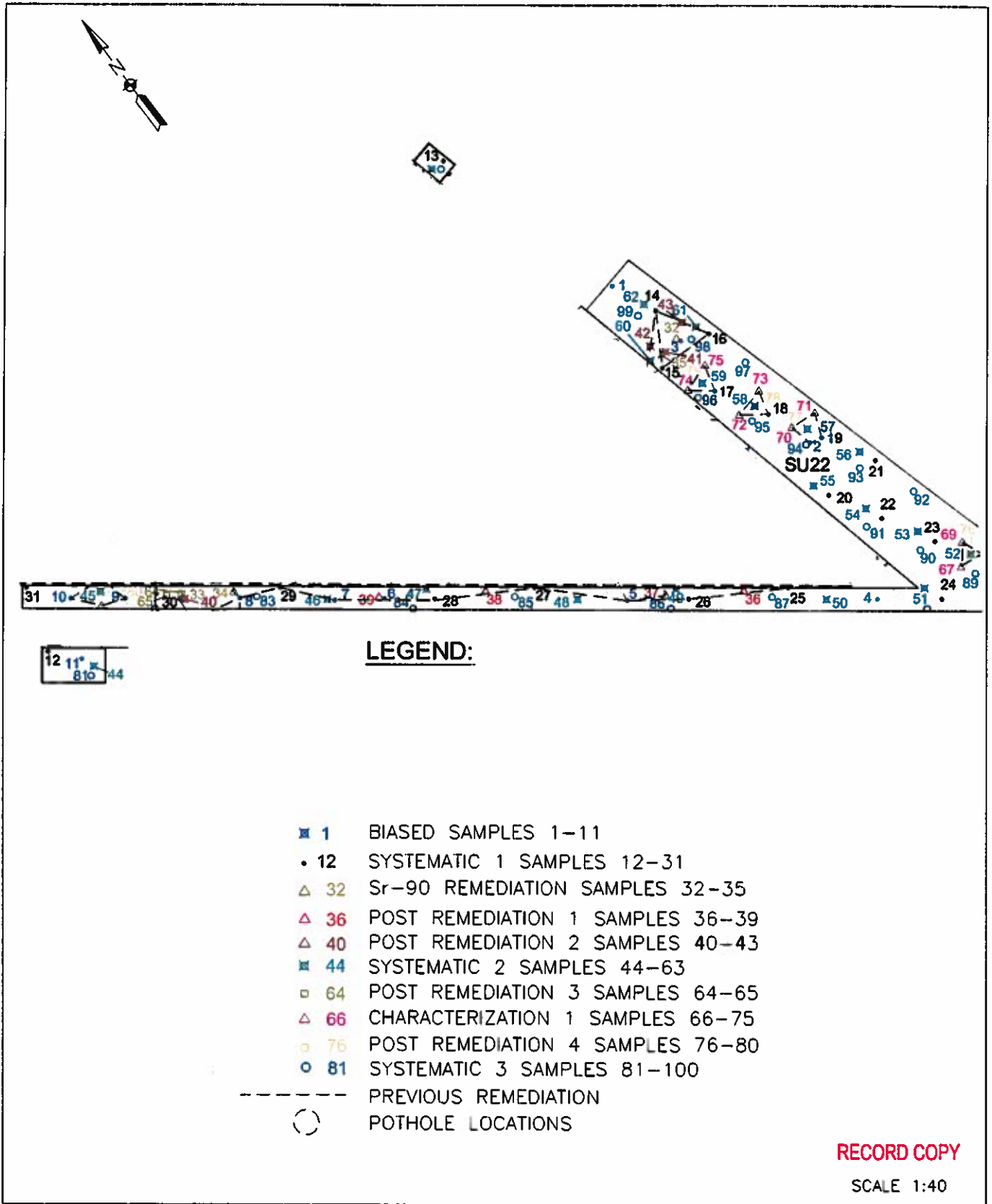
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- GAMMA TOTAL, ≥1 AND <2 SIGMA
- GAMMA TOTAL, ≥2 AND <3 SIGMA
- GAMMA TOTAL, ≥3 AND <4 SIGMA
- GAMMA TOTAL, ≥4 AND <5 SIGMA
- GAMMA TOTAL, ≥5 AND <6 SIGMA
- GAMMA TOTAL, ≥6 SIGMA
- ⊕ BIAS SAMPLE
- ⊙ SYSTEMATIC SAMPLE
- ROAD
- ▒ BUILDING
- SCREENING PAD
- WATER

10 0 10 20 Feet

Scale: 1" = 20'

BASE REALIGNMENT AND CLOSURE PROGRAM MANAGEMENT OFFICE WEST SAN DIEGO, CALIFORNIA	
REPORT TITLE BUILDING 707 SURVEY UNIT 17, SURVEY 330 HUNTERS POINT SHIPYARD SAN FRANCISCO, CALIFORNIA	
REVIEW: 0 AUTHOR: GFG DCN: ECSD-XXXX-XXXX-XXXX FILE NUMBER: su17_330.mxd	 TETRA TECH EC, INC.

P:\CTO-03 CAD FILES\DWG FILES\707 SURVEY UNITS\707_SURVEY _10-15-12.DWG
 PLOT/UPDATE: OCT 18 2012 14:29:13



HUNTERS POINT SHIPYARD
SAN FRANCISCO, CA
 P.O. BOX 884836
 SAN FRANCISCO, CA 94188

BUILDING 707
SURVEY UNIT 22



TETRA TECH EC, INC
 1230 COLUMBIA STREET, SUITE 750
 SAN DIEGO, CA 92101
 TEL: (619) 234-8690 FAX: (619) 234-8591



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 707 Survey Unit: 22 Class: 1 Area: 509.16 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1	4/22/2011 10:25	5770	5817	-47	479-BKGDS1A	7378	
2	4/22/2011 10:26	6080	5817	263	479-BKGDS1A	7378	
3	4/22/2011 10:28	6654	5817	837	479-BKGDS1A	7378	
4	4/22/2011 10:29	4686	5817	-1131	479-BKGDS1A	7378	
5	4/22/2011 10:31	4802	5817	-1015	479-BKGDS1A	7378	
6	4/22/2011 10:36	4485	5817	-1332	479-BKGDS1A	7378	
7	4/22/2011 10:38	4635	5817	-1182	479-BKGDS1A	7378	
8	4/22/2011 10:39	4827	5817	-990	479-BKGDS1A	7378	
9	4/22/2011 10:40	4797	5817	-1020	479-BKGDS1A	7378	
10	4/22/2011 10:41	5127	5817	-690	479-BKGDS1A	7378	
11	4/22/2011 10:45	6037	5817	220	479-BKGDS1A	7378	
12	4/22/2011 10:47	6508	5817	691	479-BKGDS1A	7378	
13	4/22/2011 10:56	5163	5817	-654	479-BKGDS1A	7378	
14	4/22/2011 11:23	5147	5817	-670	479-BKGDS1A	7378	
15	4/22/2011 11:25	6172	5817	355	479-BKGDS1A	7378	
16	4/22/2011 11:26	5217	5817	-600	479-BKGDS1A	7378	
17	4/22/2011 11:27	5497	5817	-320	479-BKGDS1A	7378	
18	4/22/2011 11:28	5468	5817	-349	479-BKGDS1A	7378	
19	4/22/2011 11:29	4710	5817	-1107	479-BKGDS1A	7378	
20	4/22/2011 11:30	5530	5817	-287	479-BKGDS1A	7378	
21	4/22/2011 11:32	5354	5817	-463	479-BKGDS1A	7378	
22	4/22/2011 11:33	5287	5817	-530	479-BKGDS1A	7378	
23	4/22/2011 11:34	4827	5817	-990	479-BKGDS1A	7378	
24	4/22/2011 11:35	4112	5817	-1705	479-BKGDS1A	7378	
25	4/22/2011 11:36	4909	5817	-908	479-BKGDS1A	7378	
26	4/22/2011 11:38	5437	5817	-380	479-BKGDS1A	7378	
27	4/22/2011 11:39	4880	5817	-937	479-BKGDS1A	7378	
28	4/22/2011 11:40	4867	5817	-950	479-BKGDS1A	7378	
29	4/22/2011 11:42	4802	5817	-1015	479-BKGDS1A	7378	
30	4/22/2011 11:43	4702	5817	-1115	479-BKGDS1A	7378	
31	4/22/2011 11:44	4768	5817	-1049	479-BKGDS1A	7378	
32	5/1/2012 14:16	4440	5886	-1446	621-BKGDS1A	7001	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 707 Survey Unit: 22 Class: 1 Area: 509.16 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
33	5/1/2012 14:28	5034	5886	-852	621-BKGDS1A	7001	
34	5/2/2012 10:02	4099	5886	-1787	621-BKGDS1A	7001	
35	5/2/2012 10:06	5860	5886	-26	621-BKGDS1A	7001	
36	5/14/2012 13:09	5221	5886	-665	621-BKGDS1A	7001	
37	5/14/2012 13:10	4683	5886	-1203	621-BKGDS1A	7001	
38	5/14/2012 13:11	3878	5886	-2008	621-BKGDS1A	7001	
39	5/14/2012 13:12	4449	5886	-1437	621-BKGDS1A	7001	
40	6/29/2012 13:34	3742	5845	-2103	622-BKGDS1A	7004	
41	7/2/2012 10:35	4167	5845	-1678	622-BKGDS1A	7004	
42	7/2/2012 10:37	4089	5845	-1756	622-BKGDS1A	7004	
43	7/2/2012 10:38	3963	5845	-1882	622-BKGDS1A	7004	
44	8/8/2012 7:32	6418	5845	573	622-BKGDS1A	7004	
45	7/31/2012 9:25	3881	5845	-1964	622-BKGDS1A	7004	
46	7/31/2012 9:27	3621	5845	-2224	622-BKGDS1A	7004	
47	7/31/2012 9:28	4131	5845	-1714	622-BKGDS1A	7004	
48	7/31/2012 9:30	4344	5845	-1501	622-BKGDS1A	7004	
49	7/31/2012 9:31	4202	5845	-1643	622-BKGDS1A	7004	
50	7/31/2012 9:32	4400	5845	-1445	622-BKGDS1A	7004	
51	7/31/2012 9:34	3367	5845	-2478	622-BKGDS1A	7004	
52	7/31/2012 9:35	4377	5845	-1468	622-BKGDS1A	7004	
53	7/31/2012 9:36	3276	5845	-2569	622-BKGDS1A	7004	
54	7/31/2012 9:37	4784	5845	-1061	622-BKGDS1A	7004	
55	7/31/2012 9:39	4928	5845	-917	622-BKGDS1A	7004	
56	7/31/2012 9:40	4412	5845	-1433	622-BKGDS1A	7004	
57	7/31/2012 9:41	4554	5845	-1291	622-BKGDS1A	7004	
58	7/31/2012 9:42	5563	5845	-282	622-BKGDS1A	7004	
59	7/31/2012 9:44	5143	5845	-702	622-BKGDS1A	7004	
60	7/31/2012 9:45	4309	5845	-1536	622-BKGDS1A	7004	
61	7/31/2012 9:46	4975	5845	-870	622-BKGDS1A	7004	
62	7/31/2012 9:48	4924	5845	-921	622-BKGDS1A	7004	
63	7/31/2012 9:49	4765	5845	-1080	622-BKGDS1A	7004	
64	8/2/2012 8:06	3978	5845	-1867	622-BKGDS1A	7004	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 707 Survey Unit: 22 Class: 1 Area: 509.16 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
65	8/2/2012 8:07	4091	5845	-1754	622-BKGDS1A	7004	
66	8/7/2012 11:14	4416	5845	-1429	622-BKGDS1A	7004	
67	8/7/2012 11:21	4525	5845	-1320	622-BKGDS1A	7004	
68	8/7/2012 11:22	4222	5845	-1623	622-BKGDS1A	7004	
69	8/7/2012 11:23	4448	5845	-1397	622-BKGDS1A	7004	
70	8/7/2012 11:25	5270	5845	-575	622-BKGDS1A	7004	
71	8/7/2012 11:26	4705	5845	-1140	622-BKGDS1A	7004	
72	8/7/2012 11:27	5690	5845	-155	622-BKGDS1A	7004	
73	8/7/2012 11:28	4474	5845	-1371	622-BKGDS1A	7004	
74	8/7/2012 11:29	4933	5845	-912	622-BKGDS1A	7004	
75	8/7/2012 11:30	5256	5845	-589	622-BKGDS1A	7004	
76	8/15/2012 11:17	3784	5845	-2061	622-BKGDS1A	7004	
77	8/15/2012 11:18	4223	5845	-1622	622-BKGDS1A	7004	
78	8/15/2012 11:20	4004	5845	-1841	622-BKGDS1A	7004	
79	8/15/2012 11:21	5090	5845	-755	622-BKGDS1A	7004	
80	8/15/2012 11:23	4408	5845	-1437	622-BKGDS1A	7004	
81	8/23/2012 9:29	6680	5845	835	622-BKGDS1A	7004	
82	8/23/2012 9:32	4494	5845	-1351	622-BKGDS1A	7004	
83	8/23/2012 9:34	4497	5845	-1348	622-BKGDS1A	7004	
84	8/23/2012 9:35	4127	5845	-1718	622-BKGDS1A	7004	
85	8/23/2012 9:37	4646	5845	-1199	622-BKGDS1A	7004	
86	8/23/2012 9:38	4693	5845	-1152	622-BKGDS1A	7004	
87	8/23/2012 9:40	4641	5845	-1204	622-BKGDS1A	7004	
88	8/23/2012 9:41	4105	5845	-1740	622-BKGDS1A	7004	
89	8/23/2012 9:42	4520	5845	-1325	622-BKGDS1A	7004	
90	8/23/2012 9:45	4597	5845	-1248	622-BKGDS1A	7004	
91	8/23/2012 9:46	4174	5845	-1671	622-BKGDS1A	7004	
92	8/23/2012 9:47	4355	5845	-1490	622-BKGDS1A	7004	
93	8/23/2012 9:48	4673	5845	-1172	622-BKGDS1A	7004	
94	8/23/2012 9:50	5697	5845	-148	622-BKGDS1A	7004	
95	8/23/2012 9:51	5372	5845	-473	622-BKGDS1A	7004	
96	8/23/2012 9:52	4947	5845	-898	622-BKGDS1A	7004	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 707 Survey Unit: 22 Class: 1 Area: 509.16 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
97	8/23/2012 9:54	4776	5845	-1069	622-BKGDS1A	7004	
98	8/23/2012 9:55	3712	5845	-2133	622-BKGDS1A	7004	
99	8/23/2012 9:57	5125	5845	-720	622-BKGDS1A	7004	
100	8/23/2012 9:59	4782	5845	-1063	622-BKGDS1A	7004	

**Net Gamma cpm
Summary**

Min: -2569

Avg: -1066

Max: 837

St Dev: 693

Readings > 3σ investigation level are highlighted in blue

* Background ID correlates to Instrument reference area background identification number

Gamma measurements > 3σ Investigation level are verified by 2360 beta measurements



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: 707 Survey Unit: 22 Class: 1 Area: 509.16 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

2350 Identification #: 479

Instrument/Probe Type: 2350-1 / 44-10

Instrument Serial #: 129430

Probe Serial #: 012176

Calibration Due Date: 5/12/2011

Reference Area Background Identification #: 479-BKGD51A Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	07/29/2010 10:01	5432
2	07/29/2010 10:05	6064
3	07/29/2010 10:06	5667
4	07/29/2010 10:07	5647
5	07/29/2010 10:08	6956
6	07/29/2010 10:09	6120
7	07/29/2010 10:11	5199
8	07/29/2010 10:12	5083
9	07/29/2010 10:14	5880
10	07/29/2010 10:15	5567
11	07/29/2010 10:17	6268
12	07/29/2010 10:18	5786
13	07/29/2010 10:19	5405
14	07/29/2010 10:21	5984
15	07/29/2010 10:22	7018
16	07/29/2010 10:23	5521
17	07/29/2010 10:24	5872
18	07/29/2010 10:26	5464
19	07/29/2010 10:27	6157
20	07/29/2010 10:28	5241

Gamma Mean Background (cpm): 5817

Standard Deviation: 520

Gamma 3 σ Investigation
Level (cpm): 7378



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: 707 Survey Unit: 22 Class: 1 Area: 509.16 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

2350 Identification #: 621

Instrument/Probe Type: 2350-1 / 44-10

Instrument Serial #: 98613

Probe Serial #: 192584

Calibration Due Date: 10/2/2012

Reference Area Background Identification #: 621-BKGDS1A Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	10/28/2011 13:11	6579
2	10/28/2011 13:12	5806
3	10/28/2011 13:13	5810
4	10/28/2011 13:15	5708
5	10/28/2011 13:16	5928
6	10/28/2011 13:17	6468
7	10/28/2011 13:19	6385
8	10/28/2011 13:20	6664
9	10/28/2011 13:21	5974
10	10/28/2011 13:22	5682
11	10/28/2011 13:23	5896
12	10/28/2011 13:24	5890
13	10/28/2011 13:25	5313
14	10/28/2011 13:27	5811
15	10/28/2011 13:28	5835
16	10/28/2011 13:29	5626
17	10/28/2011 13:30	5476
18	10/28/2011 13:31	5758
19	10/28/2011 13:32	5698
20	10/28/2011 13:33	5403

Gamma Mean Background (cpm): 5886

Standard Deviation: 372

Gamma 3 σ Investigation Level (cpm): 7001



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: 707 Survey Unit: 22 Class: 1 Area: 509.16 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

2350 Identification #: 622

Instrument/Probe Type: 2350-1 / 44-10

Instrument Serial #: 129430

Probe Serial #: 230163

Calibration Due Date: 10/2/2012

Reference Area Background Identification #: 622-BKGDS1A Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	10/13/2011 15:12	5811
2	10/13/2011 15:13	5788
3	10/13/2011 15:14	5839
4	10/13/2011 15:15	5848
5	10/13/2011 15:16	5775
6	10/13/2011 15:17	5780
7	10/13/2011 15:18	5977
8	10/13/2011 15:20	5831
9	10/13/2011 15:21	5998
10	10/13/2011 15:22	5240
11	10/13/2011 15:23	5892
12	10/13/2011 15:24	5899
13	10/13/2011 15:25	5001
14	10/13/2011 15:27	5852
15	10/13/2011 15:28	5894
16	10/13/2011 15:29	5075
17	10/13/2011 15:31	6115
18	10/13/2011 15:32	6400
19	10/13/2011 15:33	6490
20	10/13/2011 15:35	6396

Gamma Mean Background (cpm): 5845

Standard Deviation: 386

Gamma 3 σ Investigation
Level (cpm): 7004



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 707 Survey Unit: 22 Class: 1 Area: 509.16 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1	4/22/2011 10:04	183	158	25	512-BKGDS1A	387	
2	4/22/2011 10:12	123	158	-35	512-BKGDS1A	387	
3	4/22/2011 10:13	132	158	-26	512-BKGDS1A	387	
4	4/22/2011 10:15	144	158	-14	512-BKGDS1A	387	
5	4/22/2011 10:17	133	158	-25	512-BKGDS1A	387	
6	4/22/2011 10:18	138	158	-20	512-BKGDS1A	387	
7	4/22/2011 10:19	123	158	-35	512-BKGDS1A	387	
8	4/22/2011 10:20	111	158	-47	512-BKGDS1A	387	
9	4/22/2011 10:22	121	158	-37	512-BKGDS1A	387	
10	4/22/2011 10:23	124	158	-34	512-BKGDS1A	387	
11	4/22/2011 10:50	120	158	-38	512-BKGDS1A	387	
12	4/22/2011 10:51	134	158	-24	512-BKGDS1A	387	
13	4/22/2011 10:59	133	158	-25	512-BKGDS1A	387	
14	4/22/2011 11:03	125	158	-33	512-BKGDS1A	387	
15	4/22/2011 11:05	134	158	-24	512-BKGDS1A	387	
16	4/22/2011 11:06	150	158	-8	512-BKGDS1A	387	
17	4/22/2011 11:07	154	158	-4	512-BKGDS1A	387	
18	4/22/2011 11:08	131	158	-27	512-BKGDS1A	387	
19	4/22/2011 11:09	103	158	-55	512-BKGDS1A	387	
20	4/22/2011 11:10	125	158	-33	512-BKGDS1A	387	
21	4/22/2011 11:12	122	158	-36	512-BKGDS1A	387	
22	4/22/2011 11:13	130	158	-28	512-BKGDS1A	387	
23	4/22/2011 11:14	131	158	-27	512-BKGDS1A	387	
24	4/22/2011 11:15	107	158	-51	512-BKGDS1A	387	
25	4/22/2011 11:17	110	158	-48	512-BKGDS1A	387	
26	4/22/2011 11:18	116	158	-42	512-BKGDS1A	387	
27	4/22/2011 11:19	114	158	-44	512-BKGDS1A	387	
28	4/22/2011 11:20	132	158	-26	512-BKGDS1A	387	
29	4/22/2011 11:22	102	158	-56	512-BKGDS1A	387	
30	4/22/2011 11:23	102	158	-56	512-BKGDS1A	387	
31	4/22/2011 11:24	109	158	-49	512-BKGDS1A	387	
32	5/1/2012 14:29	165	199	-34	620-BKGDS1A	344	



TETRATECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 707 Survey Unit: 22 Class: 1 Area: 509.16 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
33	5/1/2012 14:31	194	199	-5	620-BKGDS1A	344	
34	5/2/2012 10:05	169	199	-30	620-BKGDS1A	344	
35	5/2/2012 10:09	239	199	40	620-BKGDS1A	344	
36	5/15/2012 8:25	197	199	-2	620-BKGDS1A	344	
37	5/15/2012 8:26	191	199	-8	620-BKGDS1A	344	
38	5/15/2012 8:27	182	199	-17	620-BKGDS1A	344	
39	5/15/2012 8:28	178	199	-21	620-BKGDS1A	344	
40	6/29/2012 13:34	203	199	4	620-BKGDS1A	344	
41	7/2/2012 10:44	201	199	2	620-BKGDS1A	344	
42	7/2/2012 10:46	224	199	25	620-BKGDS1A	344	
43	7/2/2012 10:47	186	199	-13	620-BKGDS1A	344	
44	8/8/2012 7:36	305	199	106	620-BKGDS1A	344	
45	7/31/2012 9:33	174	199	-25	620-BKGDS1A	344	
46	7/31/2012 9:35	173	199	-26	620-BKGDS1A	344	
47	7/31/2012 9:36	155	199	-44	620-BKGDS1A	344	
48	7/31/2012 9:37	198	199	-1	620-BKGDS1A	344	
49	7/31/2012 9:39	201	199	2	620-BKGDS1A	344	
50	7/31/2012 9:40	155	199	-44	620-BKGDS1A	344	
51	7/31/2012 9:41	169	199	-30	620-BKGDS1A	344	
52	7/31/2012 9:42	171	199	-28	620-BKGDS1A	344	
53	7/31/2012 9:43	183	199	-16	620-BKGDS1A	344	
54	7/31/2012 9:44	188	199	-11	620-BKGDS1A	344	
55	7/31/2012 9:46	219	199	20	620-BKGDS1A	344	
56	7/31/2012 9:47	194	199	-5	620-BKGDS1A	344	
57	7/31/2012 9:48	171	199	-28	620-BKGDS1A	344	
58	7/31/2012 9:49	240	199	41	620-BKGDS1A	344	
59	7/31/2012 9:50	206	199	7	620-BKGDS1A	344	
60	7/31/2012 9:51	188	199	-11	620-BKGDS1A	344	
61	7/31/2012 9:52	238	199	39	620-BKGDS1A	344	
62	7/31/2012 9:54	190	199	-9	620-BKGDS1A	344	
63	7/31/2012 9:55	224	199	25	620-BKGDS1A	344	
64	8/2/2012 8:11	152	199	-47	620-BKGDS1A	344	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 707 Survey Unit: 22 Class: 1 Area: 509.16 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
65	8/2/2012 8:13	200	199	1	620-BKGDS1A	344	
66	8/7/2012 14:33	176	199	-23	620-BKGDS1A	344	
67	8/7/2012 14:36	197	199	-2	620-BKGDS1A	344	
68	8/7/2012 14:37	214	199	15	620-BKGDS1A	344	
69	8/7/2012 14:38	162	199	-37	620-BKGDS1A	344	
70	8/7/2012 14:40	231	199	32	620-BKGDS1A	344	
71	8/7/2012 14:41	172	199	-27	620-BKGDS1A	344	
72	8/7/2012 14:42	198	199	-1	620-BKGDS1A	344	
73	8/7/2012 14:43	204	199	5	620-BKGDS1A	344	
74	8/7/2012 14:44	215	199	16	620-BKGDS1A	344	
75	8/7/2012 14:46	220	199	21	620-BKGDS1A	344	
76	8/15/2012 11:19	175	199	-24	620-BKGDS1A	344	
77	8/15/2012 11:20	169	199	-30	620-BKGDS1A	344	
78	8/15/2012 11:22	176	199	-23	620-BKGDS1A	344	
79	8/15/2012 11:23	178	199	-21	620-BKGDS1A	344	
80	8/15/2012 11:25	193	199	-6	620-BKGDS1A	344	
81	8/23/2012 9:31	253	199	54	620-BKGDS1A	344	
82	8/23/2012 9:35	206	199	7	620-BKGDS1A	344	
83	8/23/2012 9:36	176	199	-23	620-BKGDS1A	344	
84	8/23/2012 9:37	172	199	-27	620-BKGDS1A	344	
85	8/23/2012 9:39	230	199	31	620-BKGDS1A	344	
86	8/23/2012 9:40	205	199	6	620-BKGDS1A	344	
87	8/23/2012 9:42	201	199	2	620-BKGDS1A	344	
88	8/23/2012 9:43	161	199	-38	620-BKGDS1A	344	
89	8/23/2012 9:45	213	199	14	620-BKGDS1A	344	
90	8/23/2012 9:47	222	199	23	620-BKGDS1A	344	
91	8/23/2012 9:48	195	199	-4	620-BKGDS1A	344	
92	8/23/2012 9:49	206	199	7	620-BKGDS1A	344	
93	8/23/2012 9:51	178	199	-21	620-BKGDS1A	344	
94	8/23/2012 9:52	250	199	51	620-BKGDS1A	344	
95	8/23/2012 9:53	222	199	23	620-BKGDS1A	344	
96	8/23/2012 9:55	195	199	-4	620-BKGDS1A	344	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 707 **Survey Unit:** 22 **Class:** 1 **Area:** 509.16 m² **Count Time:** 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
97	8/23/2012 9:56	211	199	12	620-BKGDS1A	344	
98	8/23/2012 9:57	165	199	-34	620-BKGDS1A	344	
99	8/23/2012 9:59	204	199	5	620-BKGDS1A	344	
100	8/23/2012 10:01	216	199	17	620-BKGDS1A	344	

Net Gamma cpm **Min:** -56

Summary **Avg:** -12

Max: 106

St Dev: 28

Readings > 3σ investigation level are highlighted in blue

* Background ID correlates to instrument reference area background identification number

Gamma measurements > 3σ investigation level are verified by 2360 beta measurements



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: 707 Survey Unit: 22 Class: 1 Area: 509.16 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

2350 Identification #: 512

Instrument/Probe Type: 2350-1 / 20DT06

Instrument Serial #: 228695

Probe Serial #: 022006AE1

Calibration Due Date: 10/22/2011

Reference Area Background Identification #: 512-BKGDS1A Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	11/02/2010 8:19	162
2	11/02/2010 8:20	147
3	11/02/2010 8:22	160
4	11/02/2010 8:23	151
5	11/02/2010 8:25	138
6	11/02/2010 8:26	134
7	11/02/2010 8:28	127
8	11/02/2010 8:29	141
9	11/02/2010 8:30	152
10	11/02/2010 8:31	150
11	11/02/2010 8:32	120
12	11/02/2010 8:34	158
13	11/02/2010 8:35	122
14	11/02/2010 8:36	478
15	11/02/2010 8:38	141
16	11/02/2010 8:39	133
17	11/02/2010 8:40	147
18	11/02/2010 8:41	128
19	11/02/2010 8:42	138
20	11/02/2010 8:43	132

Gamma Mean Background (cpm): 158

Standard Deviation: 76

Gamma 3 σ Investigation
Level (cpm): 387



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: 707 Survey Unit: 22 Class: 1 Area: 509.16 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

2350 Identification #: 620

Instrument/Probe Type: 2350-1 / 20DT06

Instrument Serial #: 228694

Probe Serial #: 091806B

Calibration Due Date: 9/28/2012

Reference Area Background Identification #: 620-BKGD51A Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	10/13/2011 15:12	168
2	10/13/2011 15:13	176
3	10/13/2011 15:14	169
4	10/13/2011 15:15	178
5	10/13/2011 15:16	162
6	10/13/2011 15:17	168
7	10/13/2011 15:19	198
8	10/13/2011 15:20	190
9	10/13/2011 15:21	169
10	10/13/2011 15:22	282
11	10/13/2011 15:23	192
12	10/13/2011 15:25	230
13	10/13/2011 15:26	196
14	10/13/2011 15:27	165
15	10/13/2011 15:28	291
16	10/13/2011 15:30	147
17	10/13/2011 15:31	166
18	10/13/2011 15:32	168
19	10/13/2011 15:33	290
20	10/13/2011 15:35	284

Gamma Mean Background (cpm): 199

Standard Deviation: 48

Gamma 3 σ Investigation
Level (cpm): 344



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Exposure Rate Measurements

Page 1

Site Area: 707 Survey Unit: 22 Class: 1 Area: 509.16 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Instrument Model:	Model 19	Reference Area Background Identification #:	577-BKGDS1
Instrument Serial Number:	109970	Reference Area Background Location:	Parcel D-1 Reference
Instrument Calibration Due Date:	2/24/2012	Exposure Rate Background (μR/hr):	5

Rdg #	Date	Exposure Rate (μR/hr)	Comments
1	4/22/2011	5	
2	4/22/2011	6	
3	4/22/2011	6	
4	4/22/2011	5	
5	4/22/2011	5	
6	4/22/2011	5	
7	4/22/2011	5	
8	4/22/2011	5	
9	4/22/2011	5	
10	4/22/2011	5	
11	4/22/2011	6	
12	4/22/2011	6	
13	4/22/2011	5	
14	4/22/2011	5	
15	4/22/2011	6	
16	4/22/2011	5	
17	4/22/2011	5	
18	4/22/2011	5	
19	4/22/2011	5	
20	4/22/2011	5	
21	4/22/2011	5	
22	4/22/2011	5	
23	4/22/2011	5	
24	4/22/2011	5	
25	4/22/2011	5	
26	4/22/2011	5	
27	4/22/2011	5	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Exposure Rate Measurements

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Rdg #	Date	Exposure Rate (μ R/hr)	Comments
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28	4/22/2011	5	
29	4/22/2011	5	
30	4/22/2011	5	
31	4/22/2011	5	

Instrument Model:	Model 19	Reference Area Background Identification #:	666-BKGDS1
Instrument Serial Number:	91499	Reference Area Background Location:	Parcel D-1 Reference
Instrument Calibration Due Date:	1/15/2013	Exposure Rate Background (μ R/hr):	6

Rdg #	Date	Exposure Rate (μ R/hr)	Comments
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32	5/1/2012	5	
33	5/1/2012	5	
34	5/2/2012	5	
35	5/2/2012	6	
36	5/14/2012	5	
37	5/14/2012	5	
38	5/14/2012	5	
39	5/14/2012	5	
40	6/29/2012	5	
41	7/2/2012	6	
42	7/2/2012	6	
43	7/2/2012	6	

Instrument Model:	Model 19	Reference Area Background Identification #:	667-BKGDS1
Instrument Serial Number:	107447	Reference Area Background Location:	Parcel D-1 Reference
Instrument Calibration Due Date:	1/12/2013	Exposure Rate Background (μ R/hr):	6

Rdg #	Date	Exposure Rate (μ R/hr)	Comments
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44	8/8/2012	5	
45	7/31/2012	4	
46	7/31/2012	4	
47	7/31/2012	4	



Rdg #	Date	Exposure Rate (μ R/hr)	Comments
48	7/31/2012	4	
49	7/31/2012	4	
50	7/31/2012	5	
51	7/31/2012	5	
52	7/31/2012	5	
53	7/31/2012	4	
54	7/31/2012	4	
55	7/31/2012	4	
56	7/31/2012	5	
57	7/31/2012	5	
58	7/31/2012	5	
59	7/31/2012	5	
60	7/31/2012	5	
61	7/31/2012	5	
62	7/31/2012	6	
63	7/31/2012	6	
64	8/2/2012	4	
65	8/2/2012	4	
66	8/7/2012	5	
67	8/7/2012	5	
68	8/7/2012	5	
69	8/7/2012	5	
70	8/7/2012	5	
71	8/7/2012	5	
72	8/7/2012	5	
73	8/7/2012	5	
74	8/7/2012	6	
75	8/7/2012	6	
76	8/15/2012	5	
77	8/15/2012	5	
78	8/15/2012	5	
79	8/15/2012	5	
80	8/15/2012	5	
81	8/23/2012	6	
82	8/23/2012	5	



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Hunters Point Shipyard
San Francisco, CA

Exposure Rate Measurements

Page 4

Rdg #	Date	Exposure Rate (μ R/hr)	Comments
83	8/23/2012	5	
84	8/23/2012	5	
85	8/23/2012	5	
86	8/23/2012	4	
87	8/23/2012	4	
88	8/23/2012	5	
89	8/23/2012	4	
90	8/23/2012	5	
91	8/23/2012	5	
92	8/23/2012	5	
93	8/23/2012	5	
94	8/23/2012	6	
95	8/23/2012	5	
96	8/23/2012	6	
97	8/23/2012	5	
98	8/23/2012	5	
99	8/23/2012	5	
100	8/23/2012	5	

Exposure Rate Min: 4.00
Summary (μ R/hr) Avg: 5.03
 Max: 6.00
 St Dev: 0.54



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 01955

Project Name Radiological Building Survey		PO Number N/A		LABORATORY NAME ONSITE - RSRs		Project Information Section		
Project Location HUNTERS POINT		Project Number 3670-0003		LABORATORY ID				
Sampler Name J. Rolfe		Airbill Number N/A						
Project Chemist LISA BIENKOWSKI		Project Contact Phone 949-756-7592						
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	COMMENTS	LOCATION	SAMPLE ID
03707-S0022-F001-01	4/22/2011	0815	1		S			
03707-S0022-F002-01	4/22/2011	0820	1		S			
03707-S0022-F003-01	4/22/2011	0825	1		S			
03707-S0022-F004-01	4/22/2011	0830	1		S			
03707-S0022-F005-01	4/22/2011	0835	1		S			
03707-S0022-F006-01	4/22/2011	0840	1		S			
03707-S0022-F007-01	4/22/2011	0845	1		S			
03707-S0022-F008-01	4/22/2011	0850	1		S			
03707-S0022-F009-01	4/22/2011	0925	1		S			
03707-S0022-F010-01	4/22/2011	0930	1		S			
03707-S0022-F011-01	4/22/2011	0935	1		S			
03707-S0022-F012-01	4/22/2011	0940	1		S			

Received by: (signature) Date 4-22-11		Received by: (signature) Date 4-22-11		LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS	
Company ASRS		Company RSRs				3707 TRIANGLE FSS	
Relinquished by: (signature)		Relinquished by: (signature)		COMPOSITE DESCRIPTION		50-22	
Company		Company				BIASED 1-11	
Relinquished by: (signature)		Relinquished by: (signature)		SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)		SYSTEMATIC 12-31	
Company		Company		TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:			



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 01956

Project Name Radiological Building Survey		PO Number N/A		G A M A S P E C		S R 9 0 A		A L P H A		LABORATORY NAME ONSITE - RSRS LABORATORY ID		Project Information Section	
Project Location HUNTERS POINT		Project Number 3670-0003		Airbill Number N/A		Project Chemist Phone 949-756-7592							
Sampler Name J. Rolfe													
Project Chemist LISA BIENKOWSKI													
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	J	I	I	COMMENTS	LOCATION	SAMPLE ID	
03707-S0022-F013-01	4/22/2011	0945	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	DUP			
03707-S0022-F014-01	4/22/2011	0950	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
03707-S0022-F015-01	4/22/2011	0955	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
03707-S0022-F016-01	4/22/2011	1000	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
03707-S0022-F017-01	4/22/2011	1005	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
03707-S0022-F018-01	4/22/2011	1010	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
03707-S0022-F019-01	4/22/2011	1015	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
03707-S0022-F020-01	4/22/2011	1020	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
03707-S0022-F021-01	4/22/2011	1025	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
03707-S0022-F022-01	4/22/2011	1030	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
03707-S0022-F023-01	4/22/2011	1035	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
03707-S0022-F024-01	4/22/2011	1040	1		S		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				

Relinquished by: (signature) J. Rolfe		Date 4-22-11		Received by: (signature) C. Schneider	
Company RSRS	Time 15:00	Company RSRS	Time 15:00	Company RSRS	
Relinquished by: (signature)		Date		Received by: (signature)	
Company	Time	Company	Time	Company	
Relinquished by: (signature)		Date		Received by: (signature)	
Company	Time	Company	Time	Company	
LABORATORY INSTRUCTIONS/COMMENTS				SAMPLING COMMENTS	
COMPOSITE DESCRIPTION				SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY) TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:	



TETRA TECH EC, INC.
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San Diego, CA 92101

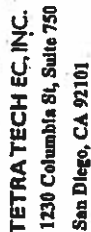
Chain-of-Custody Record

BFS 01957

Project Name Radiological Building Survey		PO Number N/A		LABORATORY NAME ONSITE - RSRS		Project Information Section	
Project Location HUNTERS POINT		Project Number 3670-0003		LABORATORY ID			
Sampler Name J. Rolfe		Airbill Number N/A					
Project Chemist LISA BIENKOWSKI		Project Contact Phone 949-756-7592					
SAMPLE ID	DATE	TIME	Containers	LEVEL	TYPE	COMMENTS	SAMPLE ID
03707-S0022-F025-01	4/22/2011	1045	1		S		
03707-S0022-F026-01	4/22/2011	1050	1		S		
03707-S0022-F027-01	4/22/2011	1055	1		S		
03707-S0022-F028-01	4/22/2011	1100	1		S		
03707-S0022-F029-01	4/22/2011	1105	1		S		
03707-S0022-F030-01	4/22/2011	1110	1		S		
03707-S0022-F031-01	4/22/2011	1115	1		S		

Relinquished by: (signature) J. Rolfe		Date 4-22-11		Received by: (signature) C. S. S. S. S.	
Company RSRS		Time 1500		Company P. S. S. S.	
Relinquished by: (signature)		Date		Received by: (signature)	
Company		Time		Company	
Relinquished by: (signature)		Date		Received by: (signature)	
Company		Time		Company	

LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS	
COMPOSITE DESCRIPTION			
SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY) TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:			



BFS 02398

Project Name Radiological Building Survey				PO Number		Project Number		Project Chemist Phone		Project Information	
Project Location: HUNTERS POINT				N/A		4044-0007		Project Chemist LISA BIENKOWSKI		Section	
Sampler Name J. Rolfe				Airbill Number		N/A		Project Chemist LISA BIENKOWSKI		LABORATORY NAME ONSITE - Curllis & Tompkins, LTD.	
Project Chemist LISA BIENKOWSKI				Project Chemist Phone 949-756-7592						LABORATORY FID	
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T	A	A	COMMENTS	LOCATION	SAMPLE ID
03707-S0022-F032-01	5/12/2012	1410	1		S						
03707-S0022-F033-01	5/12/2012	1415	1		S						

[illegible]



TETRA TECH EC, INC.
1130 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02399

Project Name Radiological Building Survey		PO Number N/A		G A S A L P H A M 9 .0 M A S P E C		LABORATORY NAME ONSITE - Curtis & Tempkins, LTD.		Project Information Section	
Project Location HUNTERS POINT		Project Number 4044-0007							
Sampler Name J. Rolfe		Airbill Number N/A							
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592							
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T A I	COMMENTS	LOCATION	SAMPLE ID
03707-S0022-F034-01	5/2/2012	1010	1		S	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
03707-S0022-F035-01	5/2/2012	1015	1		S	<input type="checkbox"/>	<input checked="" type="checkbox"/>		

Relinquished by: (signature) J. Rolfe	Date 5-2-12	Received by: (signature) [Signature]	LABORATORY INSTRUCTIONS/COMMENTS	SAMPLING COMMENTS [Handwritten notes]
Company RSRS	Time 1255	Company C4T		
Relinquished by: (signature)	Date	Received by: (signature)	COMPOSITE DESCRIPTION	
Company	Time	Company		
Relinquished by: (signature)	Date	Received by: (signature)	SAMPLE CONDITION ON RECEIPT (FOR LABORATORY)	
Company	Time	Company	TEMPERATURE SAMPLE CONDITION GODFREY SEAL	



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02424

Project Name Radiological Building Survey		PO Number N/A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section			
Project Location HUNTERS POINT		Project Number 4044-0007		LABORATORY ID					
Sample Name R Zalesky		Airbill Number N/A							
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-758-7592							
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	COMMENTS	LOCATION	SAMPLE ID
03707-S0022-F036-01	5/14/2012	1310	1		S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
03707-S0022-F037-01	5/14/2012	1315	1		S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
03707-S0022-F038-01	5/14/2012	1320	1		S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
03707-S0022-F039-01	5/14/2012	1325	1		S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		

Relinquished by: (signature) Company	Date 5.14.12	Received by: (signature) Company	LABORATORY INSTRUCTIONS/COMMENTS	SAMPLING COMMENTS
Relinquished by: (signature) Company	Time 1245	Received by: (signature) Company	(COMPOSITE DESCRIPTION)	707 TRANSFER AREA S0-22 POST-REMEDIATION 36-39
Relinquished by: (signature) Company	Date	Received by: (signature) Company	(SAMPLE CONDITION)	ON-SITE SAMPLING SPEC OFF-SITE 15 TH - SR
Relinquished by: (signature) Company	Time	Received by: (signature) Company	(COOLER SEAL)	



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

237-563

BFS 02493

Project Name Radiological Site Survey		PO Number N/A		G A M A S P E C		S R 9 0		A L P H A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD. LABORATORY ID		Project Information Section	
Project Location HUNTERS POINT		Project Number 4044-0007											
Sampler Name R. Zehner		Airbill Number N/A											
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-750-7592											
SAMPLE_ID	DATE	TIME	CONTAINERS	LEVEL	TYPE	T A T	1	1	1	COMMENTS	LOCATION	SAMPLE ID	
03707-S0022-F040-01	6/29/2012	1305	1		S			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	On-Site Gamma & Off-Site Total Sr			

Relinquished by: (signature) R. Zehner		Date 6-29-12		Received by: (signature) C. P. S.	
Company P. S. R. S.		Time 15:29		Company C. P. S.	
Relinquished by: (signature)		Date		Received by: (signature)	
Company		Time		Company	
Relinquished by: (signature)		Date		Received by: (signature)	
Company		Time		Company	
LABORATORY INSTRUCTIONS/COMMENTS		LABORATORY COMMENTS		LABORATORY COMMENTS	
COMBUSTION DESCRIPTION		COMBUSTION DESCRIPTION		COMBUSTION DESCRIPTION	
SAMPLE CONTAINER INFORMATION (FORA, BORA, TORA, TEMPERATURE, SAMPLE CONDITION, CLOSURE STATE)		SAMPLE CONTAINER INFORMATION (FORA, BORA, TORA, TEMPERATURE, SAMPLE CONDITION, CLOSURE STATE)		SAMPLE CONTAINER INFORMATION (FORA, BORA, TORA, TEMPERATURE, SAMPLE CONDITION, CLOSURE STATE)	



TETRA TECH EC, INC.
1120 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02495

237617,

Project Name Radiological Site Survey		PO Number N/A		G A S A L P H A M R 9 M 0 A S P E C		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD. LABORATORY ID		Project Information Section	
Project Location HUNTERS POINT		Project Number 4044-0007							
Sampler Name K. Zehensky		Airbill Number N/A							
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592							
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	COMMENTS	LOCATION	SAMPLE ID
03707-S0022-F041-01	7/2/2012	11:30	1		S	<input checked="" type="checkbox"/>			
03707-S0022-F042-01	7/2/2012	11:25	1		S	<input checked="" type="checkbox"/>			
03707-S0022-F043-01	7/2/2012	11:30	1		S	<input checked="" type="checkbox"/>			

Relinquished by: (signature)	Date	Received by: (signature)	LABORATORY INSTRUCTIONS/COMMENTS	SAMPLING COMMENTS
Company BFS	Time 14:39	Company C.T.		707-50022
Relinquished by: (signature)	Date	Received by: (signature)	COMPOSITE DESCRIPTION	Post-remediation
Company	Time	Company		
Relinquished by: (signature)	Date	Received by: (signature)	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)	
Company	Time	Company	TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:	



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02536

Page 1 of 1

238632

Project Name Radiological Site Survey		PO Number N/A		G A M A S S R 9 M S P H 0 P E A C		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section	
Project Location HUNTERS POINT		Project Number 4044-0007		T A T 1 1 1		LABORATORY ID			
Sampler Name J. Rolfe		Airbill Number N/A		TYPE S		LOCATION			
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592		COMMENTS DUP					
SAMPLE ID 03707-S0022-F044-01		DATE 8/8/2012		TIME 0730		LEVEL 1		SAMPLE ID	

Relinquished by: (signature) Company RSR5	Date 8-8-12	Received by: (signature) Company C&T	LABORATORY DISTRIBUTION COMMENTS 702750022 SYSTEM 11b
Relinquished by: (signature) Company	Time 0803	Received by: (signature) Company	
Relinquished by: (signature) Company	Date	Received by: (signature) Company	
Relinquished by: (signature) Company	Time	Received by: (signature) Company	



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02525

Project Name Radiological Site Survey		PO Number N/A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section		
Project Location HUNTERS POINT		Project Number 4044-0007		LABORATORY ID				
Sampler Name A. Smith		Airbill Number N/A						
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592						
SAMPLE ID	DATE	TIME	Containers	LEVEL	TYPE	COMMENTS	LOCATION	SAMPLE ID
03707-S0022-F044-01	7/31/2012	1020	1		S			
03707-S0022-F045-01	7/31/2012	1025	1		S			
03707-S0022-F046-01	7/31/2012	1030	1		S			
03707-S0022-F047-01	7/31/2012	1035	1		S			
03707-S0022-F048-01	7/31/2012	1040	1		S			
03707-S0022-F049-01	7/31/2012	1045	1		S			
03707-S0022-F050-01	7/31/2012	1050	1		S			
03707-S0022-F051-01	7/31/2012	1055	1		S			
03707-S0022-F052-01	7/31/2012	1100	1		S			
03707-S0022-F053-01	7/31/2012	1105	1		S			
03707-S0022-F054-01	7/31/2012	1110	1		S			
03707-S0022-F055-01	7/31/2012	1115	1		S			

Relinquished by: (signature) R. S. R. S.		Date 07-31-12	Received by: (signature) C. T.	
Company R. S. R. S.		Time 1355	Company C. T.	
Relinquished by: (signature)		Date	Received by: (signature)	
Company		Time	Company	
Relinquished by: (signature)		Date	Received by: (signature)	
Company		Time	Company	

LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS	
COMPOSITE DESCRIPTION		707-S0022	
SAMPLE CONDITION (FOR LABORATORY)		Systematic	
TEMPERATURE			



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02526

Project Name Radiological Site Survey		PO Number N/A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section			
Project Location HUNTERS POINT		Project Number 4044-0007		LABORATORY ID					
Sampler Name A. Smith		Airbill Number N/A							
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592							
SAMPLE ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	COMMENTS	LOCATION	SAMPLE ID
03707-S0022-F056-01	7/31/2012	1120	1		S				
03707-S0022-F057-01	7/31/2012	1125	1		S				
03707-S0022-F058-01	7/31/2012	1130	1		S				
03707-S0022-F059-01	7/31/2012	1135	1		S				
03707-S0022-F060-01	7/31/2012	1140	1		S				
03707-S0022-F061-01	7/31/2012	1145	1		S				
03707-S0022-F062-01	7/31/2012	1150	1		S				
03707-S0022-F063-01	7/31/2012	1155	1		S				

Relinquished by: (signature) A. Smith	Date 07-31-12	Received by: (signature) P. Curtis	LABORATORY INSTRUCTIONS/COMMENTS	SAMPLING COMMENTS 707-S0022 Systematic
Company B.S.R.S.	Time 1355	Company C&T		
Relinquished by: (signature)	Date	Received by: (signature)	(COMPOSITE DESCRIPTION)	
Company	Time	Company		
Relinquished by: (signature)	Date	Received by: (signature)	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY) TEMPERATURE: SAMPLE CONDITION: COOLER SEK	
Company	Time	Company		



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

238438,
BFS 02530

Project Name Radiological Site Survey		PO Number N/A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section	
Project Location HUNTERS POINT		Project Number 4044-0007		LABORATORY ID [REDACTED]			
Sampler Name J. Rolfe		Airbill Number N/A					
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-758-7592					
SAMPLE ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	COMMENTS
03707-S0022-F064-01	8/2/2012	0800	1		S		On-Site Gamma & Off-Site Total Sr
03707-S0022-F065-01	8/2/2012	0805	1		S		On-Site Gamma & Off-Site Total Sr
						LOCATION	
						SAMPLE ID	

Relinquished by: (signature) [Signature]	Date 8-2-12	Received by: (signature) [Signature]	LABORATORY INSTRUCTIONS/COMMENTS	SAMPLING CONDITIONS 707150022
Company RSK	Time 0847	Company CST		
Relinquished by: (signature)	Date	Received by: (signature)	COMPOSITE DESCRIPTION	Post remediation
Company	Time	Company		
Relinquished by: (signature)	Date	Received by: (signature)	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)	
Company	Time	Company	TEMPERATURE: SAMPLE CONDITION: GOOD RISK UP	



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

238580
BFS 02534

Project Name Radiological Site Survey		PO Number N/A		G S A L A R P H M 9 0 A S P E C		LABORATORY NAME ONSITE - Curtis & Tomplins, LTD. LABORATORY ID:		Project Information Section	
Project Location HUNTERS POINT		Project Number 4044-0007							
Sampler Name J. Rolfe		Airbill Number N/A							
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592							
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	COMMENTS	LOCATION	SAMPLE ID
03707-S0022-F066-01	8/7/2012	0950	1		S				
03707-S0022-F067-01	8/7/2012	0955	1		S				
03707-S0022-F068-01	8/7/2012	1000	1		S				
03707-S0022-F069-01	8/7/2012	1005	1		S				
03707-S0022-F070-01	8/7/2012	1010	1		S				
03707-S0022-F071-01	8/7/2012	1015	1		S				
03707-S0022-F072-01	8/7/2012	1020	1		S				
03707-S0022-F073-01	8/7/2012	1025	1		S				
03707-S0022-F074-01	8/7/2012	1030	1		S				
03707-S0022-F075-01	8/7/2012	1035	1		S				

Relinquished by: (signature) Jeff Rolfe		Date 8-7-12		Received by: (signature) CET	
Company RSRS		Time 14:28		Company CET	
Relinquished by: (signature)		Date		Received by: (signature)	
Company		Time		Company	
Relinquished by: (signature)		Date		Received by: (signature)	
Company		Time		Company	

LABORATORY INFORMATION COMMENTS		LABORATORY INFORMATION COMMENTS	
707-S0022		707-S0022	
Characterization		Characterization	



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

238833

BFS 02539

Project Name Radiological Site Survey		PO Number N/A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section	
Project Location HUNTERS POINT		Project Number 4044-0007		LABORATORY ID			
Sampler Name Jeff Rolfe		Airbill Number N/A					
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592					
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	COMMENTS	SAMPLE ID
03707-S0022-F076-01	8/15/2012	1040	1		S		
03707-S0022-F077-01	8/15/2012	1045	1		S		
03707-S0022-F078-01	8/15/2012	1050	1		S		
03707-S0022-F079-01	8/15/2012	1055	1		S		
03707-S0022-F080-01	8/15/2012	1100	1		S		

Relinquished by: (signature) Jeff Rolfe		Received by: (signature) [Signature]	
Company RSAS	Date 8-15-12	Company C&T	Company [Signature]
Relinquished by: (signature)		Received by: (signature)	
Company	Date	Company	Company
Relinquished by: (signature)		Received by: (signature)	
Company	Date	Company	Company

LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS	
COMPOSITE DESCRIPTION		70750022	
SAMPLE CONDITION UPON RECEIPT FOR LABORATORY		Post-remediation	
TEMPERATURE: SAMPLE CONDITION: COOLER/SEAL			



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

239072
BFS 02553

Project Name Radiological Site Survey		PO Number N/A		G A M M A S P E C		A L P H A		Project Information Section	
Project Location HUNTERS POINT		Project Number 4044-0007						LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.	
Sampler Name A. Smith		Airbill Number N/A						LABORATORY ID	
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592							
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	1 1 1	COMMENTS	LOCATION
03707-S0022-F081-01	8/23/2012	0830	1		S		<input checked="" type="checkbox"/>		
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03707-S0022-F086-01	8/23/2012	0925	1		S		<input checked="" type="checkbox"/>		
03707-S0022-F087-01	8/23/2012	0930	1		S		<input checked="" type="checkbox"/>		
03707-S0022-F088-01	8/23/2012	0935	1		S		<input checked="" type="checkbox"/>		
03707-S0022-F089-01	8/23/2012	0940	1		S		<input checked="" type="checkbox"/>		
03707-S0022-F090-01	8/23/2012	0945	1		S		<input checked="" type="checkbox"/>		
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Relinquished by: (signature) Company RSR		Date 8-23-12		Received by: (signature) Company CFT		LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS	
Relinquished by: (signature)		Time 1132		Received by: (signature)		COMPOSITE DESCRIPTION		707-S0022 Systematic	
Company		Date		Company		SAMPLE CONDITION/INSTRUMENT (FOR LABORATORY USE ONLY)			
Relinquished by: (signature)		Time		Received by: (signature)		ITEM DESCRIPTION: SAMPLE CONDITION: GLOVES/SEAL:			
Company		Date		Company					



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

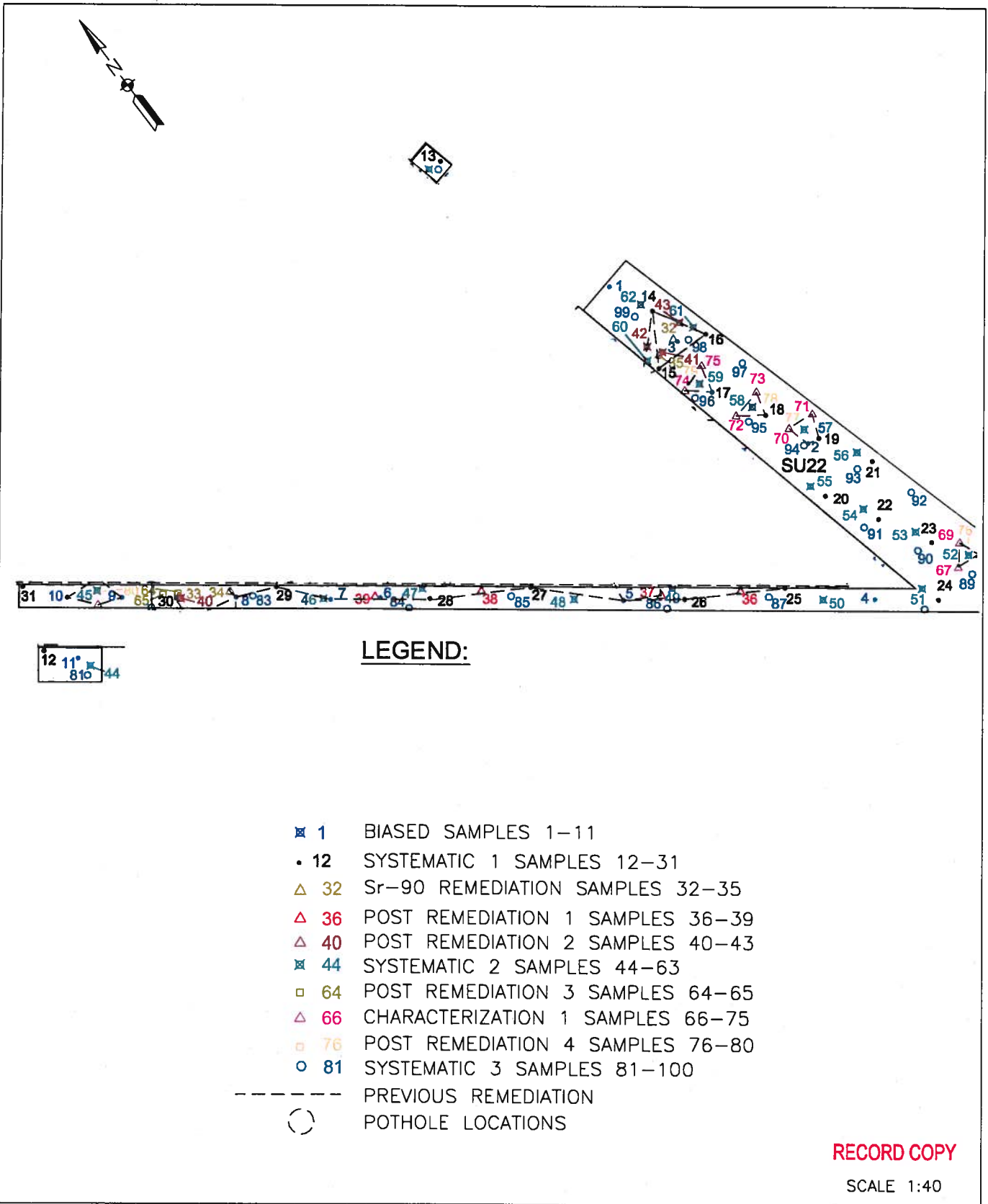
Chain-of-Custody Record

239073
BFS 02554

Project Name Radiological Site Survey		PO Number N/A		G A M M A S P E C		S R 9 0 A		A L P H A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD. LABORATORY ID		Project Information Section			
Project Location HUNTERS POINT		Project Number 4044-0007		Airbill Number N/A		Project Chemist Lisa Bienkowski		Project Chemist Phone 949-758-7592		COMMENTS		LOCATION		SAMPLE ID	
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	1	1	1	1	1	1	1	1	1
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Relinquished by: (signature) Company		Date 8-23-12	Received by: (signature) Company		LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS	
Relinquished by: (signature) Company		Time 1135	Received by: (signature) Company		COMPOSITE DESCRIPTION		707-S0022 Systematic	
Relinquished by: (signature) Company		Date	Received by: (signature) Company		SAMPLE CONDITION/UPON RECEIPT (FOR LABORATORY) TEMPERATURE: SAMPLE CONDITION: COOLER/SEAL			
Relinquished by: (signature) Company		Time	Received by: (signature) Company					

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 PLOT/UPDATE: OCT 18 2012 14:29:13



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HUNTERS POINT SHIPYARD
SAN FRANCISCO, CA
 P.O. BOX 884836
 SAN FRANCISCO, CA 94188

BUILDING 707
SURVEY UNIT 22



TETRA TECH EC, INC
 1230 COLUMBIA STREET, SUITE 750
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TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel E and Utility Corridor 3 (UC3) Storm Drain and Sanitary Sewer Removal Action

Report Date: April 22, 2011	EMAC – CTO 03
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Overview

The HPS Team continued field activities in the Building 707 Triangle Area and Work Areas #16 and #21. Details of the work activities performed are provided in the sections below.

Building 707 Triangle Area

- The HPS Team performed survey activities in Survey Unit 22. A total of 11 biased and 20 systematic gamma static measurements were logged. The maximum measurements logged were 183 cpm (FIDLER) and 6,654 cpm. In addition, 31 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPS Team provided the RASO with analytical results for the characterization samples collected from pothole lifts in Survey Unit 7. No activity above the release criteria was identified
- The HPS Team provided the RASO with off-site analytical results for the post-remediation samples collected from Survey Unit 20. No activity above the release criteria was identified.

Parcel E/UC3 Storm Drain and Sanitary Sewer Removal Activities

- A variety of housekeeping activities were performed throughout Parcels E and UC3 by the HPS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: May 1, 2012

RMAC – CTO 07

Overview

The HPNS Team continued field activities for the Building 707 Triangle, the 500 Series Area, and Work Areas #21 and #36. Details of the activities performed are provided below.

Building 707 Triangle

- A total of 49 cubic yards of soil were remediated from Class 1 Survey Units 21 and 22 by the HPNS Team and placed in LLRW bins AWIU000261, ERRU000145, and GFLU001030T1 for off-site disposal.
- The HPNS Team performed Class 1 survey activities as follows:
 - Asphalt Grid A7 – A total of 550 alpha/beta scan readings were logged. The preliminary data indicates the presence of beta activity above the release limit in one scan reading logged at 1,100 dpm/100 cm².
 - Survey Unit 22 – A total of four post-remediation gamma static measurements were logged with maximum measurements of 194 cpm (FIDLER) and 5,034 cpm. In addition, two soil samples were collected and submitted to the off-site laboratory for total strontium analysis.
- The RSO is in the process of reviewing the survey data for Asphalt Grid A7 and Survey Unit 22.

500 Series Area

- The HPNS Team provided the RASO with on-site analytical results for the characterization samples collected from Class 1 Survey Units 13, 16, and 18. Because no activity above the release criteria was identified, remediation followed by post-remediation sample collection activities will be performed.
- The HPNS Team provided the RASO with on-site analytical results for the biased and systematic samples collected from Class 1 Survey Unit 14. Characterization and remediation will be continued due to the presence of ¹³⁷Cs contamination as follows:
 - Sample Point 7 (07500SA-S0014-F007-01) with ¹³⁷Cs at 0.1183 pCi/g
 - Sample Point 17 (07500SA-S0014-F017-01) with ¹³⁷Cs at 0.2425 pCi/g
 - Sample Point 37 (07500SA-S0014-F037-01) with ¹³⁷Cs at 0.3768 pCi/g

- The HPNS Team provided the RASO with on-site analytical results for the additional characterization samples collected from Class 1 Survey Units 19 and 21. Because no activity above the release criteria was identified, no further remediation will be performed in these survey units.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- The HPNS Team excavated approximately 204 cubic yards of soil from Work Area #36 and transferred materials to both RSY3 and RSY4 for processing. Excavation activities were performed for the following trench segments:
 - 07-E36-00-7F 133 linear feet completed
 - 07-E36-00-7G 10 linear feet completed
 - 07-E36-00-7H 12 linear feet completed
 - 07-E36-00-7I 6 linear feet completed
 - 07-E36-00-8Y 25 linear feet completed
- A total of 161 linear feet of trench (including excavated soil, a manhole, and pipes) identified on the design drawings and 25 linear feet not identified on the design drawings were completed by the HPNS Team.
- Excavated Manhole MH1244 was placed on plastic pending further activities.
- The HPNS Team provided the RASO with analytical results for the sediment samples collected from Manholes MH1302 and MH1303. Both manholes will be placed in LLRW bins for off-site disposal due to the presence of ^{137}Cs contamination as follows:
 - Manhole MH1302 (07-PEMH1302-013-01) with ^{137}Cs at 0.2161 pCi/g
 - Manhole MH1303 (07-PEMH1303-014-01) with ^{137}Cs at 0.1319 pCi/g
- The HPNS Team provided the RASO with analytical results for the investigative samples collected from Trench Unit No. 249. Characterization and remediation will be performed due to the presence of ^{137}Cs contamination at Sample Point 17 (0.2726 pCi/g).
- The HPNS Team provided the RASO with analytical results for the systematic samples collected from Trench Unit No. 248; no activity above the release criteria was identified.
- A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: May 2, 2012

RMAC – CTO 07

Overview

The HPNS Team continued field activities for the Building 520 Site, the Building 707 Triangle, Shacks 79 and 80, the 500 Series Area, and Work Areas #21 and #36. Details of the activities performed are provided in the sections below.

Building 520 Site

- The HPNS Team provided the RASO with off-site analytical results for the replacement systematic sample collected from Class 1 Survey Unit 5; no activity above the release criteria was identified.

Building 707 Triangle

- A total of 18 cubic yards of soil were remediated from Class 1 Survey Unit 21 by the HPNS Team and placed in LLRW bin ERRU000162 for off-site disposal.
- The HPNS Team performed Class 1 survey activities as follows:
 - Asphalt Grid A7 – A total of 1,100 alpha/beta scan readings were logged. The preliminary data results did not indicate the presence of alpha/beta activity above the release limits.
 - Survey Unit 22 – A total of four post-remediation gamma static measurements were logged with maximum measurements of 239 cpm (FIDLER) and 5,859 cpm. In addition, two soil samples were collected and submitted to the off-site laboratory for total strontium analysis.
- The RSO is in the process of reviewing the survey data for Asphalt Grid A7 and Survey Unit 22.

Shacks 79 and 80

- The HPNS Team provided the RASO with total strontium analytical results for the samples collected from Class 1 Survey Unit 2 that identified elevated ¹³⁷Cs activity; no further contamination was identified.

500 Series Area

- Approximately 2.5 cubic yards of soil was remediated from Class 1 Survey Units 16 and 18 by the HPNS Team and placed in LLRW bin AWIU000263 for off-site disposal.

- The HPNS Team provided the RASO with off-site analytical results for the systematic samples collected from Class 1 Survey Unit 20. Characterization and remediation will be performed due to the presence of ^{137}Cs contamination at Sample Point 76 (0.161 pCi/g).
- The HPNS Team provided the RASO with total strontium analytical results for the samples collected from Class 1 Survey Units 15 and 17 that identified elevated ^{137}Cs activity; no further contamination was identified.
- The HPNS Team provided the RASO with off-site analytical results for the replacement systematic sample collected from Class 1 Survey Unit 1; no activity above the release criteria was identified
- The HPNS Team provided the RASO with off-site analytical results for the systematic samples collected from Class 1 Survey Unit 21; no activity above the release criteria was identified.
- The HPNS Team issued the following drawings:
 - Survey Unit 12 Biased and Systematic Sample Collection
 - Survey Unit 14 Characterization Sample Collection
 - Survey Unit 16 Remediation and Post-Remediation Sample Collection
 - Survey Unit 18 Remediation and Post-Remediation Sample Collection
 - Survey Unit 19 Characterization Sample Collection
 - Survey Unit 21 Remediation and Post-Remediation Sample Collection.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- The HPNS Team excavated approximately 312 cubic yards of soil from Work Area #36 and transferred the material to RSY4 for processing. Excavation activities were performed for the following trench segments:
 - 07-E36-00-7G 108 linear feet completed
 - 07-E36-00-9L 24 linear feet completed
 - 07-E36-38-3U 51 linear feet completed
 - 07-E36-38-3W 60 linear feet completed
 - 07-E36-38-3X 30 linear feet completed
- A total of 249 linear feet of trench (including excavated soil and pipes) identified on the design drawings and 24 linear feet not identified on the design drawings were completed by the HPNS Team.
- The HPNS Team issued drawings to identify locations for remediation and post-remediation sample collection in Trench Unit No. 249.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: May 14, 2012

RMAC – CTO 07

Overview

The HPNS Team continued field activities for the Building 707 Triangle, the 500 Series Area, and Work Areas #21 and #36. Details of the activities performed are provided below.

Building 707 Triangle

- Approximately 4 cubic yards of soil was remediated from Class 1 Survey Unit 21 by the HPNS Team and placed in LLRW bin GFLU001181T4 for off-site disposal.
- The HPNS Team performed Class 1 survey activities as follows:
 - Survey Unit 21 – A total of 30 post-remediation gamma static measurements were logged with maximum measurements of 229 cpm (FIDLER) and 5,202 cpm. In addition, 15 soil samples were collected and submitted to the on-site laboratory for analysis.
 - Survey Unit 22 – A total of eight post-remediation gamma static measurements were logged with maximum measurements of 197 cpm (FIDLER) and 5,220 cpm. In addition, four soil samples were collected and submitted to the on-site laboratory for analysis.
- The RSO is in the process of reviewing the survey data for Survey Units 14 and 20.

500 Series Area

- The HPNS Team performed Class 1 survey activities for Survey Unit 19. A total of three characterization gamma static measurements were logged with a maximum measurement of 6,238 cpm. In addition, three soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPNS Team issued drawings to identify biased, characterization, and systematic sample collection locations in Class 1 Survey Unit 11 and record drawings to identify post-remediation sample collection locations in Class 1 Survey Units 14 and 20.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- The HPNS Team excavated approximately 396 cubic yards of soil from Work Area #36 and transferred the material to both RSY3 and RSY4 for processing. Excavation activities were performed for the following trench segments:
 - 07-E36-00-3T 58 linear feet completed

- 07-E36-00-3U 25 linear feet completed
 - 07-E36-00-3X 3 linear feet completed
 - 07-E36-00-3Z 24 linear feet completed
 - 07-E36-00-4A 10 linear feet completed
 - 07-E36-39-1U 10 linear feet completed
- A total of 130 linear feet of trench (including excavated soil and pipes) identified on the design drawings were completed by the HPNS Team.
 - Pipes excavated from trench segments 07-E36-00-3T, 07-E36-00-3Z, and 07-E36-39-1U were placed on plastic pending further activities.
 - The HPNS Team investigated trench segment 07-E36-00-3X for the presence of pipe. Although depicted on the design drawing, no pipe was found during the investigation.
 - A sediment sample was collected from pipe excavated from trench segment 07-E36-00-3T (07-PEPI-0028-01) by the HPNS Team and submitted to the on-site laboratory for analysis.
 - A total of 18 systematic soil samples were collected from Trench Unit No. 301 by the HPNS Team and submitted to the on-site laboratory for analysis.
 - A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: June 29, 2012

RMAC – CTO 07

Overview

The HPNS Team continued field activities for Building 500, the Building 506 and 531 Sites, the Building 707 Triangle, the 500 Series Area, and Work Areas #21 and #36. Details of the activities performed are provided in the sections below.

Building 707 Triangle

- A total of 15 cubic yards were remediated from Class 1 Survey Units 16, 22, and 23 by the HPNS Team and placed in LLRW bins BKRU026000T12 and MHFU001109T18 for off-site disposal.
- The HPNS Team performed additional survey activities around the previously remediated strontium spill area (Class 1 Survey Units 16, 21, 22, and 23). Two previous pothole excavations were remediated and 12 post-remediation gamma static readings logged. The maximum measurements recorded were 216 cpm (FIDLER) and 5,456 cpm. In addition, six soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPNS Team performed Class 1 survey activities in Survey Units 16, 22, and 23. A total of 6 post-remediation gamma static readings logged with the maximum measurements recorded at 203 cpm (FIDLER) and 3,722 cpm. In addition, 3 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

500 Series Area

- The HPNS Team provided the RASO with revised on-site analytical results for the biased and systematic samples collected from Class 1 Survey Unit 22. Characterization and remediation will continue to be performed due to the presence of additional ^{137}Cs contamination as follows:
 - Sample Point 11 (07500SA-S0022-F011-01) with ^{137}Cs at 0.1628 pCi/g
 - Sample Point 38 (07500SA-S0022-F038-01) with ^{137}Cs at 0.1207 pCi/g
- The HPNS Team provided the RASO with revised on-site analytical results for the biased and systematic samples collected from Class 1 Survey Unit 23. Characterization and remediation will continue to be performed due to the presence of additional ^{137}Cs contamination as follows:

- Sample Point 14 (07500SA-S0023-F014-01) with ^{137}Cs at 0.1215 pCi/g
- Sample Point 16 (07500SA-S0023-F016-01) with ^{137}Cs at 0.1338 pCi/g
- Sample Point 35 (07500SA-S0023-F035-01) with ^{137}Cs at 0.1146 pCi/g
- Sample Point 40 (07500SA-S0023-F040-01) with ^{137}Cs at 0.1210 pCi/g
- The HPNS Team provided the RASO with revised on-site analytical results for the biased and systematic samples collected from Class 1 Survey Unit 24. Characterization and remediation will continue to be performed due to the presence of additional ^{137}Cs contamination as follows:
 - Sample Point 7 (07500SA-S0024-F007-01) with ^{137}Cs at 0.1434 pCi/g
 - Sample Point 11 (07500SA-S0024-F011-01) with ^{137}Cs at 0.1412 pCi/g
- The HPNS Team provided the RASO with total strontium analytical results for the elevated ^{137}Cs samples collected from Class 1 Survey Unit 20; no further contamination was identified.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- The HPNS Team provided the RASO with on-site analytical results of the systematic samples collected from Trench Unit No. 308 (associated with the Building 506 and 531 Sites). Because no activity above the release criteria was identified, the systematic samples will be submitted to the off-site laboratory for analysis.
- The HPNS Team issued drawings to identify locations for systematic sample collection in Trench Unit No. 311 (associated with Building 500) and an updated Parcel E Trench Survey Unit Key Plan.
- Swale installation activities along Hussey Street were continued by the HPNS Team.
- A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: July 2, 2012

RMAC – CTO 07

Overview

The HPNS Team continued field activities for the Building 520 Site, Shacks 79 and 80, the Building 707 Triangle, the 500 Series Area, and Work Areas #21 and #36. Details of the activities performed are provided in the sections below.

Building 520 Site

- The HPNS Team provided the RASO with isotopic plutonium analytical results for the elevated ⁹⁰Sr sample collected from Class 1 Survey Unit 5; no further contamination was identified.

Shacks 79 & 80

- Approximately 1 cubic yard of soil was remediated from Class 1 Survey Unit 1 by the HPNS Team and placed in LLRW bin GFLU001228T17 for off-site disposal.
- The HPNS Team performed Class 1 survey activities for Survey Unit 1. A total of three characterization and one replacement systematic gamma static measurements were logged with a maximum measurement of 4,491 cpm. In addition, four soil samples were collected and submitted to the on-site and off-site laboratories for analysis. The RSO is in the process of reviewing these data.
- The HPNS Team issued drawings to identify remediation and both characterization and replacement systematic sample collection locations in Class 1 Survey Unit 1.

Building 707 Triangle

- Approximately 14 cubic yards of soil was remediated from Class 1 Survey Units 21 and 22 by the HPNS Team and placed in LLRW bins GFLU001200T18 and GFLU001233T8 for off-site disposal.
- The HPNS Team performed Class 1 survey activities as follows:
 - Survey Unit 21 – A total of four post-remediation gamma static readings were logged with the maximum measurements recorded at 215 cpm (FIDLER) and 4,148 cpm. In addition, two soil samples were collected and submitted to the on-site laboratory for analysis.

- Survey Unit 22 – A total of six post-remediation gamma static readings were logged with the maximum measurements recorded at 224 cpm (FIDLER) and 4,167 cpm. In addition, three soil samples were collected and submitted to the on-site laboratory for analysis.
- The RSO is in the process of reviewing the survey data for Survey Units 21 and 22
- The HPNS Team issued record drawings to identify post-remediation sample collection locations in the pothole excavations associated with the previously remediated strontium spill area (Class 1 Survey Units 16, 21, 22, and 23).

500 Series Area

- The HPNS Team provided the RASO with total strontium analytical results for the elevated ^{137}Cs sample collected from Class 1 Survey Unit 16; no further contamination was identified.
- The HPNS Team provided the RASO with the off-site analytical results for the systematic and replacement systematic samples collected from Class 1 Survey Units 10, 14, and 20; no activity above the release criteria was identified.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- The HPNS Team provided the RASO with total strontium analytical results for the elevated ^{137}Cs samples collected from Trench Unit No. 300; no further contamination was identified.
- Swale installation activities were continued by the HPNS Team along Hussey Street.
- A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: August 8, 2012

RMAC – CTO 07

Overview

The HPNS Team continued field activities for the Building 506 Site, the Building 707 Triangle, the 500 Series Area, and Work Areas #21 and #36. Details of the activities performed are provided in the sections below.

Building 506 Site

- The HPNS Team continued excavation and removal activities for the containment vault associated with the former underground radiological waste storage tank in Survey Unit 3; removed concrete walls and support structures were placed on plastic pending upcoming radiological surveys
- Approximately 15 cubic yards of the concrete containment vault bottom were removed and placed directly into LLRW bins AWIU000175T1 and ERRU000162T1 for off-site disposal.

Building 707 Triangle

- The HPNS Team performed Class 1 survey activities for Survey Unit 22. A total of two replacement systematic gamma static measurements were logged at 305 cpm (FIDLER) and 6,418 cpm. In addition, a soil sample was collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPNS Team provided the RASO with total strontium analytical results for the characterization and post-remediation samples collected from Class 1 Survey Unit 23; no activity above the release criteria was identified.

500 Series Area

- Approximately 30 cubic yards of concrete and soil were remediated from Class 1 Survey Unit 24 by the HPNS Team and placed in LLRW bins AWIU000107, AWIU000175T1, AWIU000190, ERRU000150, ERRU000162T1, GFLU001015T3, and GFLU001051T1 for off-site disposal.
- The HPNS Team provided the RASO with on-site analytical results for the characterization samples collected from Class 1 Survey Unit 24. Characterization and remediation will be continued due to the presence of ^{137}Cs above the release criteria at Sample Point 66 (0.1557 pCi/g).

- The HPNS Team provided the RASO with total strontium analytical results for the elevated ^{137}Cs samples collected from Class 1 Survey Units 15, 23, and 24; no further contamination was identified.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- The HPNS Team provided the RASO with off-site analytical results for the systematic samples collected from Trench Unit No. 305 (associated with the Building 510/510A and 517 Sites). Characterization and remediation will be performed due to the presence of ^{137}Cs above the release criteria at Sample Point 34 (0.170 pCi/g).
- The HPNS Team provided the RASO with total strontium analytical results for the elevated ^{137}Cs sample collected from Trench Unit No. 305 (associated with the Building 510/510A and 517 Sites); no further contamination was identified.
- Swale installation activities were continued by the HPNS Team along H and Hussey Streets.
- Grinding and recycling activities were performed by Kroeker and the HPNS Team on approximately 861 tons of asphalt near Building 411.
- A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel E and Building 500 Series Removal Action

Report Date: July 31, 2012	RMAC – CTO 07
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Overview

The HPNS Team continued field activities for the Building 506 Site, the Building 707 Triangle, Shacks 79 and 80, the 500 Series Area, and Work Areas #21 and #36. Details of the activities performed are provided in the sections below.

Building 506 Site

- The HPNS Team completed excavation of the remaining tank pit concrete floor and walls associated with the former underground radiological waste storage tank in Survey Unit 3. The tank pit measures approximately 10 feet in width, 30 feet in length, and 8 feet in depth. A sump pump measuring 1 cubic foot was identified at the base of the structure. Due to the presence of the cracked vault floor, a sample was collected from the soil beneath the concrete surface and submitted to the on-site laboratory for analysis
- During radiological surface scanning of the removed soil and debris, 170 linear feet of 1.5 inch diameter utility piping, 1 sump filter, 2 metal valves, and 4 cubic yards of soil indicated the presence of elevated gamma readings. The HPNS Team transferred these items to LLRW bin ERRU000159T1 for off-site disposal. In addition, a waste characterization sample was collected and submitted to the on-site laboratory for analysis.
- Perimeter fencing was installed around the exposed tank pit by the HPNS Team.

Building 707 Triangle

- The HPNS Team performed Class 1 survey activities as follows:
 - Survey Unit 22 – A total of 40 systematic gamma static measurements were logged with the maximum measurements recorded at 240 cpm (FIDLER) and 5,563 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis.
 - Survey Unit 23 – A total of 4 biased and 40 systematic gamma static measurements were logged with the maximum measurements recorded at 286 cpm (FIDLER) and 5,730 cpm. In addition, 22 soil samples were collected and submitted to the on-site laboratory for analysis.
- The RSO is in the process of reviewing the survey data for Survey Units 23 and 24

- The HPNS Team provided the RASO with the following:
 - Total strontium analytical results for the 10 additional 12-inch deep pothole excavations around the previously remediated strontium spill area (Class 1 Survey Units 16, 21, 22, and 23); no activity above the release criteria was identified.
 - Total strontium analytical results for the characterization sample collected from Class 1 Survey Unit 23; no activity above the release criteria was identified.
 - Total strontium analytical results for the post-remediation samples collected from Class 1 Survey Unit 22. Characterization and remediation will be performed due to the presence of ⁹⁰Sr activity above the release criteria at Sample Point 40 (1.29 pCi/g).
 - Isotopic plutonium analytical results for the elevated ⁹⁰Sr samples collected from Class 1 Survey Units 21 and 22; no further contamination was identified.
 - Off-site analytical results for the systematic samples collected from Class 1 Survey Unit 14; no activity above the release criteria was identified.

Shacks 79 and 80

- The HPNS Team provided the RASO with off-site analytical results for the replacement systematic sample collected from Class 1 Survey Unit 1; no activity above the release criteria was identified.

500 Series Area

- Approximately 3 cubic yards of soil was remediated from Class 1 Survey Unit 15 by the HPNS Team and placed in LLRW bin ERRU000159T1 for off-site disposal.
- The HPNS Team performed Class 1 survey activities for Survey Unit 15. A total of three post-remediation gamma static measurements were logged with a maximum measurement of 6,811 cpm. In addition, three soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- Swale installation activities were continued by the HPNS Team along H and Hussey Streets.
- Approximately 855 tons of asphalt near Building 411 was ground and recycled by Kroeker and the HPNS Team.
- A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: August 2, 2012

RMAC – CTO 07

Overview

The HPNS Team continued field activities for the Building 506 Site, the Building 707 Triangle, the 500 Series Area, and Work Areas #21 and #36. Details of the activities performed are provided in the sections below.

Building 506 Site

- The HPNS Team provided the RASO with on-site analytical results for the three unique soil stratifications encountered during excavation of the containment vault associated with the former radiological waste storage tank. Because ^{137}Cs contamination was identified in the lowest soil layer at 0.2263 pCi/g (Sample No. 07AB506-246), soil and debris removed from the containment vault will be disposed of as LLRW.
- The HPNS Team provided the RASO with on-site analytical results for the soil sample collected from the access hole in the containment vault concrete floor. Because ^{137}Cs contamination was identified in Sample No. 07AB506-247 at 0.4690 pCi/g, the containment vault and surrounding soils will be excavated and disposed of as LLRW.
- Approximately 54 cubic yards of soil removed from the containment vault was transferred by the HPNS Team to LLRW bins AWIU000105T1, GFLU000108T1, and GFLU001186T19 for off-site disposal. In addition, waste characterization samples were collected for each LLRW bin and submitted to the on-site laboratory for analysis.

Building 707 Triangle

- The HPNS Team performed Class 1 survey activities for Survey Unit 22. A total of four post-remediation gamma static measurements were logged with the maximum gamma measurements recorded at 200 cpm (FIDLER) and 4,091 cpm. In addition, two soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

500 Series Area

- The HPNS Team provided the RASO with the on-site analytical results for the post-remediation samples collected from Class 1 Survey Unit 15; no activity above the release criteria was identified.

- The HPNS Team issued drawings to identify the replacement systematic sample collection location in Class 1 Survey Unit 15 and remediation locations in Class 1 Survey Unit 24 and Class 2 Survey Unit 25.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- Approximately 879 tons of asphalt was ground and recycled near Building 411 by Kroeker and the HPNS Team.
- A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: August 7, 2012

RMAC – CTO 07

Overview

The HPNS Team continued field activities for the Building 506 Site, the Building 707 Triangle, the 500 Series Area, and Work Areas #21 and #36. Details of the activities performed are provided in the sections below.

Building 506 Site

- The HPNS Team continued activities on the containment vault concrete floor and walls associated with the former underground radiological waste storage tank in Survey Unit 3. The upper five feet of the containment vault concrete walls were removed and placed on plastic pending radiological survey activities.
- Approximately 10 cubic yards of soil generated during excavation of the outer walls of the containment vault were transferred by the HPNS Team to LLRW bin AWIU000216T1 for off-site disposal.

Building 707 Triangle

- The HPNS Team performed Class 1 survey activities as follows:
 - Survey Unit 16 – A total of two characterization gamma static measurements were logged at 226 cpm (FIDLER) and 6,811 cpm. In addition, a soil sample was collected and submitted to the on-site laboratory for analysis.
 - Survey Unit 22 – A total of twenty characterization gamma static measurements were logged with the maximum measurements recorded at 231 cpm (FIDLER) and 5,689 cpm. In addition, ten soil samples were collected and submitted to the on-site laboratory for analysis.
- The RSO is in the process of reviewing survey data for Class 1 Survey Units 16 and 22.
- The HPNS Team issued drawings to identify characterization sample collection locations in Class 1 Survey Units 16 and 22.

500 Series Area

- The HPNS Team issued drawings to identify remediation locations in Class 1 Survey Units 22 through 24.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- Grinding and recycling activities were performed by Kroeker and the HPNS Team on approximately 893 tons of asphalt near Building 411.
- A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel E and Building 500 Series Removal Action

Report Date: August 15, 2012	RMAC – CTO 07
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Overview

The HPNS Team continued field activities for the Building 506 Site, the Building 707 Triangle, the 500 Series Area, and Work Areas #21 and #36. Details of the activities performed are provided in the sections below.

Building 506 Site

- Approximately 6.5 cubic yards of concrete associated with the containment vault concrete walls was removed and placed directly into LLRW bin AWIU000258 for off-site disposal.

Building 707 Triangle

- Approximately 7 cubic yards of soil was remediated from Class 1 Survey Units 16 and 22 by the HPNS Team and placed in LLRW bins AWIU000258 and BKRU025663T20 for off-site disposal.
- The HPNS Team performed Class 1 survey activities for Survey Unit 22. A total of 10 post-remediation static gamma measurements were logged with maximum measurements of 193 cpm (FIDLER) and 5,090 cpm. In addition, five soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

500 Series Area

- The HPNS Team performed Class 1 survey activities for Survey Unit 23. A total of 27 post-remediation gamma static measurements were logged with a maximum measurement of 6,834 cpm. In addition, 27 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPNS Team issued record drawings to identify post-remediation sample collection locations in Class 1 Survey Units 23 and 24.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- Backfill activities were continued for Trench Unit No. 307 by the HPNS Team.
- The HPNS Team provided the RASO with on-site analytical results for the replacement systematic sample collected from Trench Unit No. 305 (associated with the Building 510/510A and 517 Sites). Because no activity above the release criteria was identified, the systematic samples will be submitted to the off-site laboratory for analysis.
- Grinding and recycling activities were performed by Kroeker and the HPNS Team on approximately 501 tons of asphalt near Building 411.
- A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: August 23, 2012	RMAC – CTO 07
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Overview

The HPNS Team continued field activities for the Building 707 Triangle, the 500 Series Area, and Work Areas #21 and #36. Details of the activities performed are provided below.

Building 707 Triangle

- The HPNS Team performed Class 1 survey activities for Survey Unit 22. A total of 40 systematic gamma static measurements were logged with maximum measurements of 253 cpm (FIDLER) and 6,680 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPNS Team issued drawings to identify systematic sample collection locations in Class 1 Survey Unit 22.

500 Series Area

- The HPNS Team provided the RASO with on-site laboratory analytical results for the post-remediation samples collected from Class 1 Survey Unit 24. Because no activity above the release criteria was identified, systematic sample collection activities will be performed.
- The HPNS Team provided the RASO with on-site laboratory analytical and survey results for the systematic soil samples collected from Class 1 Survey Unit 26. Because no activity above the release criteria was identified, the systematic samples will be submitted to the off-site laboratory for analysis.
- The HPNS Team issued drawings to identify systematic sample collection locations in Class 1 Survey Unit 24.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- Backfill activities were continued for Trench Unit No. 300 by the HPNS Team.
- Backfill activities were initiated for Trench Unit No. 306 (associated with the Building 507, 508, and 509 Sites) by the HPNS Team.
- The HPNS Team issued an updated Parcel E Trench Survey Unit Key Plan.

- Staged rebar and scrap metal debris was sized and prepared for transfer to the recycling bins near Building 411.
- Grinding and recycling activities were performed by Kroeker and the HPNS Team on approximately 251 tons of concrete near Building 411.
- A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

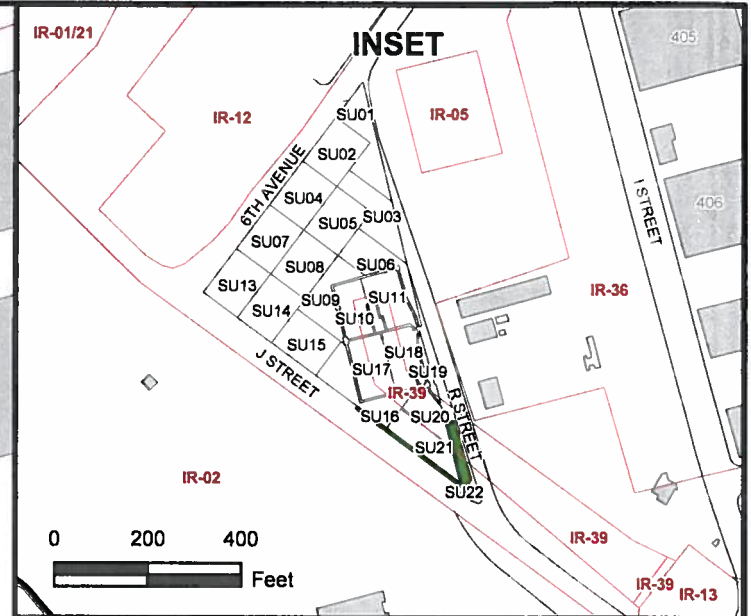
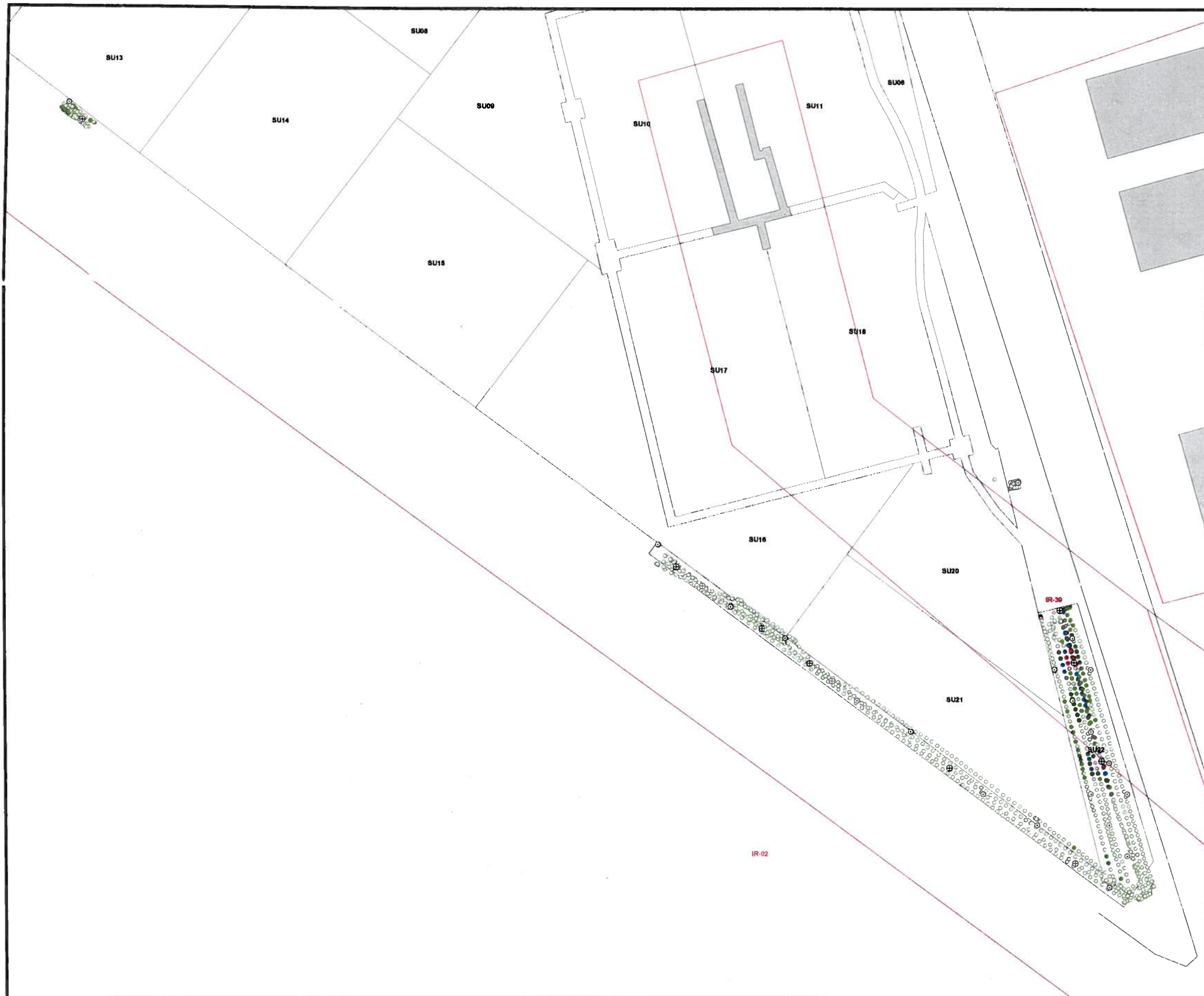
Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report

Area	Survey Unit	Sample Point	Sample Type	Sample ID	Date Collected	COC Radiological Technician
707	22	54	Systematic	03707-S0022-F054-01	31-Jul-12	Anthony Smith
707	22	55	Systematic	03707-S0022-F055-01	31-Jul-12	Anthony Smith
707	22	56	Systematic	03707-S0022-F056-01	31-Jul-12	Anthony Smith
707	22	57	Systematic	03707-S0022-F057-01	31-Jul-12	Anthony Smith
707	22	58	Systematic	03707-S0022-F058-01	31-Jul-12	Anthony Smith
707	22	59	Systematic	03707-S0022-F059-01	31-Jul-12	Anthony Smith
707	22	60	Systematic	03707-S0022-F060-01	31-Jul-12	Anthony Smith
707	22	61	Systematic	03707-S0022-F061-01	31-Jul-12	Anthony Smith
707	22	62	Systematic	03707-S0022-F062-01	31-Jul-12	Anthony Smith
707	22	63	Systematic	03707-S0022-F063-01	31-Jul-12	Anthony Smith
707	22	64	Post-Remediation	03707-S0022-F064-01	02-Aug-12	Jeff Rolfe
707	22	65	Post-Remediation	03707-S0022-F065-01	02-Aug-12	Jeff Rolfe
707	22	66	Characterization	03707-S0022-F066-01	07-Aug-12	Jeff Rolfe
707	22	67	Characterization	03707-S0022-F067-01	07-Aug-12	Jeff Rolfe
707	22	68	Characterization	03707-S0022-F068-01	07-Aug-12	Jeff Rolfe
707	22	69	Characterization	03707-S0022-F069-01	07-Aug-12	Jeff Rolfe
707	22	70	Characterization	03707-S0022-F070-01	07-Aug-12	Jeff Rolfe
707	22	71	Characterization	03707-S0022-F071-01	07-Aug-12	Jeff Rolfe
707	22	72	Characterization	03707-S0022-F072-01	07-Aug-12	Jeff Rolfe
707	22	73	Characterization	03707-S0022-F073-01	07-Aug-12	Jeff Rolfe
707	22	74	Characterization	03707-S0022-F074-01	07-Aug-12	Jeff Rolfe
707	22	75	Characterization	03707-S0022-F075-01	07-Aug-12	Jeff Rolfe
707	22	76	Post-Remediation	03707-S0022-F076-01	15-Aug-12	Jeff Rolfe
707	22	77	Post-Remediation	03707-S0022-F077-01	15-Aug-12	Jeff Rolfe
707	22	78	Post-Remediation	03707-S0022-F078-01	15-Aug-12	Jeff Rolfe
707	22	79	Post-Remediation	03707-S0022-F079-01	15-Aug-12	Jeff Rolfe
707	22	80	Post-Remediation	03707-S0022-F080-01	15-Aug-12	Jeff Rolfe
707	22	81	Systematic	03707-S0022-F081-01	23-Aug-12	Anthony Smith
707	22	82	Systematic	03707-S0022-F082-01	23-Aug-12	Anthony Smith
707	22	83	Systematic	03707-S0022-F083-01	23-Aug-12	Anthony Smith
707	22	84	Systematic	03707-S0022-F084-01	23-Aug-12	Anthony Smith
707	22	85	Systematic	03707-S0022-F085-01	23-Aug-12	Anthony Smith
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707	22	93	Systematic	03707-S0022-F093-01	23-Aug-12	Anthony Smith
707	22	94	Systematic	03707-S0022-F094-01	23-Aug-12	Anthony Smith
707	22	95	Systematic	03707-S0022-F095-01	23-Aug-12	Anthony Smith
707	22	96	Systematic	03707-S0022-F096-01	23-Aug-12	Anthony Smith
707	22	97	Systematic	03707-S0022-F097-01	23-Aug-12	Anthony Smith
707	22	98	Systematic	03707-S0022-F098-01	23-Aug-12	Anthony Smith
707	22	99	Systematic	03707-S0022-F099-01	23-Aug-12	Anthony Smith
707	22	100	Systematic	03707-S0022-F100-01	23-Aug-12	Anthony Smith

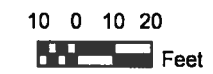
K-40	Ra-226	Cs-137	Bi-214	Pb-214
16.7	0.4551	0.02982	0.3168	0.3305
10.95	0.3957	0.03285	0.1733	0.3511
18.59	1.256	0.007916	0.3746	0.6653
13.83	0.7944	0.3355	0.3142	0.3599
18.95	0.6319	0.1291	0.4015	0.4725
17.71	0.6347	0.1419	0.4266	0.4528
13.46	0.5706	0.007399	0.3933	0.4135
14.8	0.7045	0.01191	0.3468	0.4122
18.25	1.029	0	0.3393	0.363
9.038	0.2303	-0.004328	0.2561	0.2155
1.158	0.3027	0	0.05071	0.0558
1.214	0.09519	-0.00141	-0.01005	0.0466
1.844	0	0.0004094	0.1142	0.09381
0.9697	0.15	-0.004368	0.05798	0.1215
0.9118	-0.1572	-0.006097	0.06276	0.1386
0.7041	0.1991	-0.002815	0.04832	0.03374
0.8321	0.0368	-0.003946	0.02724	0.05868
0.9673	0.3704	-0.004617	0.03761	0.1344
0.5437	0.1259	0.006632	0.0611	0
0.486	0.2445	0.009228	0.05871	0.06633
0.9082	0.1311	-0.004249	0.02277	0.04243
1.41	0.01773	-0.001018	0.03966	0.05691
1.119	0.0758	0.00602	0.1084	0.1071
0.9082	0.1134	0	0.06834	0.01176
0.4755	0.3053	-0.000699	0.05184	0.04178
1.221	0.0934	-0.004716	0.04945	0.1233
0.8861	0.108	0	0.003372	0.1362
0.5238	0.1046	0	0.0457	0.06157
0.5046	-0.01796	0	0.03112	0.04465
1.018	0.1995	0.00782	0.01325	0.09882
0.6387	0.2445	-0.0006185	0.04372	0.05256
0.4676	0.1138	0	0.01568	0.02506
0.4036	0.1243	-0.00585	0.01166	0.0399
0.6427	0.1398	-0.002715	0.01433	0.1456
0.5402	0.06083	0	-0.03851	0.01219
0.6286	0.004864	-0.00746	-0.005137	-0.007707
0.8984	-0.01682	-0.007707	0.04843	0.05357
0.4446	0.08688	0.006627	0.02457	0.04072
0.7225	-0.09149	-0.003634	0.0361	0.03664
0.6219	0	-0.0003882	0.05494	0.05583
0.8285	0.003954	0.003053	0.06295	0.1074
1.306	0.05902	0	0.0778	0.06895
1.165	0.2001	0.004483	0.04389	0.2061
0.8961	0.153	0	0.08016	0.05605
0.7094	0.2738	0	0.02735	0.07018
1.197	0.4918	0.004195	0.04845	0.08865
0.3402	0.5001	0	0.01793	0.03381

[illegible]



LEGEND

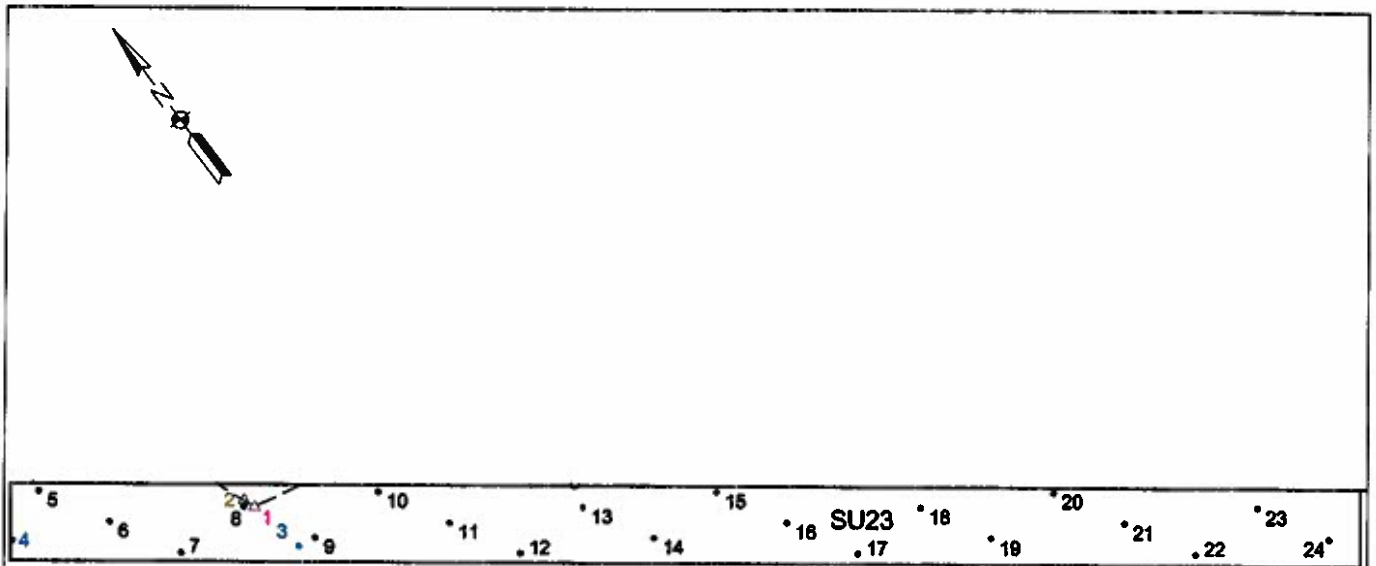
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- GAMMA TOTAL, ≥1 AND <2 SIGMA
- GAMMA TOTAL, ≥2 AND <3 SIGMA
- GAMMA TOTAL, ≥3 AND <4 SIGMA
- GAMMA TOTAL, ≥4 AND <5 SIGMA
- GAMMA TOTAL, ≥5 AND <6 SIGMA
- GAMMA TOTAL, ≥6 SIGMA
- BIAS SAMPLE
- SYSTEMATIC SAMPLE
- ROAD
- BUILDING
- SCREENING PAD
- WATER



Scale: 1" = 20'



BASE REALIGNMENT AND CLOSURE PROGRAM MANAGEMENT OFFICE WEST SAN DIEGO, CALIFORNIA	
REPORT TITLE BUILDING 707 SURVEY UNIT 22 HUNTERS POINT SHIPYARD SAN FRANCISCO, CALIFORNIA	
REVIEW: 0 AUTHOR: GFG DCN: ECSD-XXXX-XXXX-XXXX FILE NUMBER: B707_SU22.mxd	 TETRA TECH EC, INC.



SU23

LEGEND:

- △ 1 CHARACTERIZATION 1 SAMPLE 1
- △ 2 POST REMEDIATION 1 SAMPLE 2
- 3 BIASED SAMPLES 3-4
- 5 SYSTEMATIC 1 SAMPLES 5-24
- PREVIOUS REMEDIATION

RECORD COPY

SCALE 1:40

P:\CTO-03 CAD FILES\DWG FILES\707 SURVEY UNITS\707_SURVEY _10-15-12.DWG
PLOT/UPDATE: OCT 18 2012 14:34:57

HUNTERS POINT SHIPYARD
SAN FRANCISCO, CA
P.O. BOX 884836
SAN FRANCISCO, CA 94188

BUILDING 707
SURVEY UNIT 23



TETRA TECH EC, INC
1230 COLUMBIA STREET, SUITE 750
SAN DIEGO, CA 92101
TEL: (619) 234-8690 FAX: (619) 234-8591



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 707 Survey Unit: 23 Class: 1 Area: 469.07 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1	6/22/2012 9:39	4296	5845	-1549	622-BKGDS1A	7004	Collected at Sidewall 12" depth
1	6/22/2012 9:37	5548	5845	-297	622-BKGDS1A	7004	Collected at Surface 0" depth
1	6/22/2012 9:40	4827	5845	-1018	622-BKGDS1A	7004	Collected at Bottom 24" depth
2	6/29/2012 13:35	3722	5845	-2123	622-BKGDS1A	7004	
3	7/31/2012 7:55	5730	5845	-115	622-BKGDS1A	7004	
4	7/31/2012 7:57	5268	5845	-577	622-BKGDS1A	7004	
5	7/31/2012 7:58	4974	5845	-871	622-BKGDS1A	7004	
6	7/31/2012 7:59	4848	5845	-997	622-BKGDS1A	7004	
7	7/31/2012 8:00	5696	5845	-149	622-BKGDS1A	7004	
8	7/31/2012 8:02	4212	5845	-1633	622-BKGDS1A	7004	
9	7/31/2012 8:03	5152	5845	-693	622-BKGDS1A	7004	
10	7/31/2012 8:04	4642	5845	-1203	622-BKGDS1A	7004	
11	7/31/2012 8:05	4112	5845	-1733	622-BKGDS1A	7004	
12	7/31/2012 8:07	4670	5845	-1175	622-BKGDS1A	7004	
13	7/31/2012 8:08	4827	5845	-1018	622-BKGDS1A	7004	
14	7/31/2012 8:10	4143	5845	-1702	622-BKGDS1A	7004	
15	7/31/2012 8:11	4855	5845	-990	622-BKGDS1A	7004	
16	7/31/2012 8:13	4427	5845	-1418	622-BKGDS1A	7004	
17	7/31/2012 8:14	4315	5845	-1530	622-BKGDS1A	7004	
18	7/31/2012 8:15	4502	5845	-1343	622-BKGDS1A	7004	
19	7/31/2012 8:17	4631	5845	-1214	622-BKGDS1A	7004	
20	7/31/2012 8:18	4685	5845	-1160	622-BKGDS1A	7004	
21	7/31/2012 8:20	4975	5845	-870	622-BKGDS1A	7004	
22	7/31/2012 8:21	5343	5845	-502	622-BKGDS1A	7004	
23	7/31/2012 8:22	4315	5845	-1530	622-BKGDS1A	7004	
24	7/31/2012 8:24	5117	5845	-728	622-BKGDS1A	7004	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 707 Survey Unit: 23 Class: 1 Area: 469.07 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
-------	-------------	-----------------------	----------------------------	---------------------	-------------------	------------------------------------	----------

Net Gamma cpm Min: -2123

Summary Avg: -1082

Max: -115

St Dev: 508

Readings > 3σ investigation level are highlighted in blue

* Background ID correlates to instrument reference area background identification number

Gamma measurements > 3σ investigation level are verified by 2360 beta measurements



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: 707 Survey Unit: 23 Class: 1 Area: 469.07 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

2350 Identification #: 622

Instrument/Probe Type: 2350-1 / 44-10

Instrument Serial #: 129430

Probe Serial #: 230163

Calibration Due Date: 10/2/2012

Reference Area Background Identification #: 622-BKGDS1A Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	10/13/2011 15:12	5811
2	10/13/2011 15:13	5788
3	10/13/2011 15:14	5839
4	10/13/2011 15:15	5848
5	10/13/2011 15:16	5775
6	10/13/2011 15:17	5780
7	10/13/2011 15:18	5977
8	10/13/2011 15:20	5831
9	10/13/2011 15:21	5998
10	10/13/2011 15:22	5240
11	10/13/2011 15:23	5892
12	10/13/2011 15:24	5899
13	10/13/2011 15:25	5001
14	10/13/2011 15:27	5852
15	10/13/2011 15:28	5894
16	10/13/2011 15:29	5075
17	10/13/2011 15:31	6115
18	10/13/2011 15:32	6400
19	10/13/2011 15:33	6490
20	10/13/2011 15:35	6396

Gamma Mean Background (cpm): 5845

Standard Deviation: 386

Gamma 3 σ Investigation
Level (cpm): 7004



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 707 Survey Unit: 23 Class: 1 Area: 469.07 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1	6/22/2012 9:37	168	199	-31	620-BKGDS1A	344	Collected at Bottom 24" depth
1	6/22/2012 9:36	171	199	-28	620-BKGDS1A	344	Collected at Sidewall 12" depth
1	6/22/2012 9:34	223	199	24	620-BKGDS1A	344	Collected at Surface 0" depth
2	6/29/2012 13:36	152	199	-47	620-BKGDS1A	344	
3	7/31/2012 8:01	286	199	87	620-BKGDS1A	344	
4	7/31/2012 8:02	194	199	-5	620-BKGDS1A	344	
5	7/31/2012 8:03	217	199	18	620-BKGDS1A	344	
6	7/31/2012 8:04	184	199	-15	620-BKGDS1A	344	
7	7/31/2012 8:05	203	199	4	620-BKGDS1A	344	
8	7/31/2012 8:07	180	199	-19	620-BKGDS1A	344	
9	7/31/2012 8:08	223	199	24	620-BKGDS1A	344	
10	7/31/2012 8:09	235	199	36	620-BKGDS1A	344	
11	7/31/2012 8:10	172	199	-27	620-BKGDS1A	344	
12	7/31/2012 8:11	201	199	2	620-BKGDS1A	344	
13	7/31/2012 8:12	225	199	26	620-BKGDS1A	344	
14	7/31/2012 8:14	176	199	-23	620-BKGDS1A	344	
15	7/31/2012 8:15	208	199	9	620-BKGDS1A	344	
16	7/31/2012 8:16	180	199	-19	620-BKGDS1A	344	
17	7/31/2012 8:17	195	199	-4	620-BKGDS1A	344	
18	7/31/2012 8:18	155	199	-44	620-BKGDS1A	344	
19	7/31/2012 8:19	207	199	8	620-BKGDS1A	344	
20	7/31/2012 8:20	180	199	-19	620-BKGDS1A	344	
21	7/31/2012 8:22	177	199	-22	620-BKGDS1A	344	
22	7/31/2012 8:23	177	199	-22	620-BKGDS1A	344	
23	7/31/2012 8:24	185	199	-14	620-BKGDS1A	344	
24	7/31/2012 8:25	201	199	2	620-BKGDS1A	344	



TETRATECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 707 Survey Unit: 23 Class: 1 Area: 469.07 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
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Net Gamma cpm Min: -47

Summary Avg: -4

Max: 87

St Dev: 29

Readings > 3σ investigation level are highlighted in blue

* Background ID correlates to instrument reference area background identification number

Gamma measurements > 3σ investigation level are verified by 2360 beta measurements



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 23 Class: 1 Area: 469.07 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1	5/8/2012 14:24	166	199	-33	620-BKGDS1A	344	
2	5/8/2012 14:24	177	199	-22	620-BKGDS1A	344	
3	5/8/2012 14:24	168	199	-31	620-BKGDS1A	344	
4	5/8/2012 14:24	202	199	3	620-BKGDS1A	344	
5	5/8/2012 14:25	204	199	5	620-BKGDS1A	344	
6	5/8/2012 14:25	229	199	30	620-BKGDS1A	344	
7	5/8/2012 14:25	263	199	64	620-BKGDS1A	344	
8	5/8/2012 14:25	239	199	40	620-BKGDS1A	344	
9	5/8/2012 14:25	257	199	58	620-BKGDS1A	344	
10	5/8/2012 14:25	272	199	73	620-BKGDS1A	344	
11	5/8/2012 14:25	286	199	87	620-BKGDS1A	344	
12	5/8/2012 14:25	195	199	-4	620-BKGDS1A	344	
13	5/8/2012 14:25	233	199	34	620-BKGDS1A	344	
14	5/8/2012 14:26	220	199	21	620-BKGDS1A	344	
15	5/8/2012 14:26	201	199	2	620-BKGDS1A	344	
16	5/8/2012 14:26	152	199	-47	620-BKGDS1A	344	
17	5/8/2012 14:26	164	199	-35	620-BKGDS1A	344	
18	5/8/2012 14:26	182	199	-17	620-BKGDS1A	344	
19	5/8/2012 14:26	188	199	-11	620-BKGDS1A	344	
20	5/8/2012 14:26	219	199	20	620-BKGDS1A	344	
21	5/8/2012 14:26	178	199	-21	620-BKGDS1A	344	
22	5/8/2012 14:26	216	199	17	620-BKGDS1A	344	
23	5/8/2012 14:27	178	199	-21	620-BKGDS1A	344	
24	5/8/2012 14:27	229	199	30	620-BKGDS1A	344	
25	5/8/2012 14:27	194	199	-5	620-BKGDS1A	344	
26	5/8/2012 14:27	282	199	83	620-BKGDS1A	344	
27	5/8/2012 14:27	275	199	76	620-BKGDS1A	344	
28	5/8/2012 14:27	189	199	-10	620-BKGDS1A	344	
29	5/8/2012 14:27	155	199	-44	620-BKGDS1A	344	
30	5/8/2012 14:27	171	199	-28	620-BKGDS1A	344	
31	5/8/2012 14:28	200	199	1	620-BKGDS1A	344	
32	5/8/2012 14:28	212	199	13	620-BKGDS1A	344	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 23 Class: 1 Area: 469.07 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
33	5/8/2012 14:28	192	199	-7	620-BKGDS1A	344	
34	5/8/2012 14:28	200	199	1	620-BKGDS1A	344	
35	5/8/2012 14:28	158	199	-41	620-BKGDS1A	344	
36	5/8/2012 14:28	165	199	-34	620-BKGDS1A	344	
37	5/8/2012 14:28	176	199	-23	620-BKGDS1A	344	
38	5/8/2012 14:28	160	199	-39	620-BKGDS1A	344	
39	5/8/2012 14:28	173	199	-26	620-BKGDS1A	344	
40	5/8/2012 14:29	137	199	-62	620-BKGDS1A	344	
41	5/8/2012 14:29	208	199	9	620-BKGDS1A	344	
42	5/8/2012 14:29	213	199	14	620-BKGDS1A	344	
43	5/8/2012 14:29	210	199	11	620-BKGDS1A	344	
44	5/8/2012 14:29	166	199	-33	620-BKGDS1A	344	
45	5/8/2012 14:29	202	199	3	620-BKGDS1A	344	
46	5/8/2012 14:29	251	199	52	620-BKGDS1A	344	
47	5/8/2012 14:29	207	199	8	620-BKGDS1A	344	
48	5/8/2012 14:30	231	199	32	620-BKGDS1A	344	
49	5/8/2012 14:30	189	199	-10	620-BKGDS1A	344	
50	5/8/2012 14:30	213	199	14	620-BKGDS1A	344	
51	5/8/2012 14:30	46	199	-153	620-BKGDS1A	344	
52	5/8/2012 14:30	136	199	-63	620-BKGDS1A	344	
53	5/8/2012 14:31	118	199	-81	620-BKGDS1A	344	
54	5/8/2012 14:31	199	199	0	620-BKGDS1A	344	
55	5/8/2012 14:31	242	199	43	620-BKGDS1A	344	
56	5/8/2012 14:31	203	199	4	620-BKGDS1A	344	
57	5/8/2012 14:31	176	199	-23	620-BKGDS1A	344	
58	5/8/2012 14:31	187	199	-12	620-BKGDS1A	344	
59	5/8/2012 14:31	187	199	-12	620-BKGDS1A	344	
60	5/8/2012 14:31	148	199	-51	620-BKGDS1A	344	
61	5/8/2012 14:31	186	199	-13	620-BKGDS1A	344	
62	5/8/2012 14:32	180	199	-19	620-BKGDS1A	344	
63	5/8/2012 14:32	141	199	-58	620-BKGDS1A	344	
64	5/8/2012 14:32	126	199	-73	620-BKGDS1A	344	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 23 Class: 1 Area: 469.07 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
65	5/8/2012 14:32	145	199	-54	620-BKGDS1A	344	
66	5/8/2012 14:32	150	199	-49	620-BKGDS1A	344	
67	5/8/2012 14:32	135	199	-64	620-BKGDS1A	344	
68	5/8/2012 14:32	153	199	-46	620-BKGDS1A	344	
69	5/8/2012 14:32	141	199	-58	620-BKGDS1A	344	
70	5/8/2012 14:33	159	199	-40	620-BKGDS1A	344	
71	5/8/2012 14:33	195	199	-4	620-BKGDS1A	344	
72	5/8/2012 14:33	202	199	3	620-BKGDS1A	344	
73	5/8/2012 14:33	209	199	10	620-BKGDS1A	344	
74	5/8/2012 14:33	172	199	-27	620-BKGDS1A	344	
75	5/8/2012 14:33	182	199	-17	620-BKGDS1A	344	
76	5/8/2012 14:33	229	199	30	620-BKGDS1A	344	
77	5/8/2012 14:33	204	199	5	620-BKGDS1A	344	
78	5/8/2012 14:33	222	199	23	620-BKGDS1A	344	
79	5/8/2012 14:34	198	199	-1	620-BKGDS1A	344	
80	5/8/2012 14:34	209	199	10	620-BKGDS1A	344	
81	5/8/2012 14:34	222	199	23	620-BKGDS1A	344	
82	5/8/2012 14:34	169	199	-30	620-BKGDS1A	344	
83	5/8/2012 14:34	152	199	-47	620-BKGDS1A	344	
84	5/8/2012 14:34	184	199	-15	620-BKGDS1A	344	
85	5/8/2012 14:34	177	199	-22	620-BKGDS1A	344	
86	5/8/2012 14:34	197	199	-2	620-BKGDS1A	344	
87	5/8/2012 14:35	293	199	94	620-BKGDS1A	344	
88	5/8/2012 14:35	251	199	52	620-BKGDS1A	344	
89	5/8/2012 14:35	208	199	9	620-BKGDS1A	344	
90	5/8/2012 14:35	224	199	25	620-BKGDS1A	344	
91	5/8/2012 14:35	209	199	10	620-BKGDS1A	344	
92	5/8/2012 14:35	164	199	-35	620-BKGDS1A	344	
93	5/8/2012 14:35	182	199	-17	620-BKGDS1A	344	
94	5/8/2012 14:35	196	199	-3	620-BKGDS1A	344	
95	5/8/2012 14:35	226	199	27	620-BKGDS1A	344	
96	5/8/2012 14:36	246	199	47	620-BKGDS1A	344	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 23 Class: 1 Area: 469.07 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
97	5/8/2012 14:36	208	199	9	620-BKGDS1A	344	
98	5/8/2012 14:36	180	199	-19	620-BKGDS1A	344	
99	5/8/2012 14:36	200	199	1	620-BKGDS1A	344	
100	5/8/2012 14:36	189	199	-10	620-BKGDS1A	344	
101	5/8/2012 14:37	77	199	-122	620-BKGDS1A	344	
102	5/8/2012 14:37	100	199	-99	620-BKGDS1A	344	
103	5/8/2012 14:37	184	199	-15	620-BKGDS1A	344	
104	5/8/2012 14:37	187	199	-12	620-BKGDS1A	344	
105	5/8/2012 14:37	174	199	-25	620-BKGDS1A	344	
106	5/8/2012 14:37	244	199	45	620-BKGDS1A	344	
107	5/8/2012 14:37	280	199	81	620-BKGDS1A	344	
108	5/8/2012 14:37	225	199	26	620-BKGDS1A	344	
109	5/8/2012 14:37	221	199	22	620-BKGDS1A	344	
110	5/8/2012 14:38	256	199	57	620-BKGDS1A	344	
111	5/8/2012 14:38	201	199	2	620-BKGDS1A	344	
112	5/8/2012 14:38	251	199	52	620-BKGDS1A	344	
113	5/8/2012 14:38	179	199	-20	620-BKGDS1A	344	
114	5/8/2012 14:38	173	199	-26	620-BKGDS1A	344	
115	5/8/2012 14:38	255	199	56	620-BKGDS1A	344	
116	5/8/2012 14:38	179	199	-20	620-BKGDS1A	344	
117	5/8/2012 14:38	217	199	18	620-BKGDS1A	344	
118	5/8/2012 14:39	173	199	-26	620-BKGDS1A	344	
119	5/8/2012 14:39	227	199	28	620-BKGDS1A	344	
120	5/8/2012 14:39	237	199	38	620-BKGDS1A	344	
121	5/8/2012 14:39	192	199	-7	620-BKGDS1A	344	
122	5/8/2012 14:39	242	199	43	620-BKGDS1A	344	
123	5/8/2012 14:39	217	199	18	620-BKGDS1A	344	
124	5/8/2012 14:39	178	199	-21	620-BKGDS1A	344	
125	5/8/2012 14:39	179	199	-20	620-BKGDS1A	344	
126	5/8/2012 14:39	254	199	55	620-BKGDS1A	344	
127	5/8/2012 14:40	226	199	27	620-BKGDS1A	344	
128	5/8/2012 14:40	199	199	0	620-BKGDS1A	344	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 23 Class: 1 Area: 469.07 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
129	5/8/2012 14:40	159	199	-40	620-BKGDS1A	344	
130	5/8/2012 14:40	171	199	-28	620-BKGDS1A	344	
131	5/8/2012 14:40	185	199	-14	620-BKGDS1A	344	
132	5/8/2012 14:40	171	199	-28	620-BKGDS1A	344	
133	5/8/2012 14:40	216	199	17	620-BKGDS1A	344	
134	5/8/2012 14:40	231	199	32	620-BKGDS1A	344	
135	5/8/2012 14:41	180	199	-19	620-BKGDS1A	344	
136	5/8/2012 14:41	198	199	-1	620-BKGDS1A	344	
137	5/8/2012 14:41	167	199	-32	620-BKGDS1A	344	
138	5/8/2012 14:41	161	199	-38	620-BKGDS1A	344	
139	5/8/2012 14:41	180	199	-19	620-BKGDS1A	344	
140	5/8/2012 14:41	205	199	6	620-BKGDS1A	344	
141	5/8/2012 14:41	244	199	45	620-BKGDS1A	344	
142	5/8/2012 14:41	190	199	-9	620-BKGDS1A	344	
143	5/8/2012 14:41	170	199	-29	620-BKGDS1A	344	
144	5/8/2012 14:42	189	199	-10	620-BKGDS1A	344	
145	5/8/2012 14:42	216	199	17	620-BKGDS1A	344	
146	5/8/2012 14:42	192	199	-7	620-BKGDS1A	344	
147	5/8/2012 14:42	183	199	-16	620-BKGDS1A	344	
148	5/8/2012 14:42	178	199	-21	620-BKGDS1A	344	
149	5/8/2012 14:42	207	199	8	620-BKGDS1A	344	
150	5/8/2012 14:42	228	199	29	620-BKGDS1A	344	
151	5/8/2012 14:43	81	199	-118	620-BKGDS1A	344	
152	5/8/2012 14:43	109	199	-90	620-BKGDS1A	344	
153	5/8/2012 14:43	150	199	-49	620-BKGDS1A	344	
154	5/8/2012 14:43	182	199	-17	620-BKGDS1A	344	
155	5/8/2012 14:43	128	199	-71	620-BKGDS1A	344	
156	5/8/2012 14:43	116	199	-83	620-BKGDS1A	344	
157	5/8/2012 14:43	150	199	-49	620-BKGDS1A	344	
158	5/8/2012 14:44	117	199	-82	620-BKGDS1A	344	
159	5/8/2012 14:44	187	199	-12	620-BKGDS1A	344	
160	5/8/2012 14:44	163	199	-36	620-BKGDS1A	344	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 23 Class: 1 Area: 469.07 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
161	5/8/2012 14:44	221	199	22	620-BKGDS1A	344	
162	5/8/2012 14:44	188	199	-11	620-BKGDS1A	344	
163	5/8/2012 14:44	173	199	-26	620-BKGDS1A	344	
164	5/8/2012 14:44	207	199	8	620-BKGDS1A	344	
165	5/8/2012 14:44	167	199	-32	620-BKGDS1A	344	
166	5/8/2012 14:44	175	199	-24	620-BKGDS1A	344	
167	5/8/2012 14:45	165	199	-34	620-BKGDS1A	344	
168	5/8/2012 14:45	146	199	-53	620-BKGDS1A	344	
169	5/8/2012 14:45	184	199	-15	620-BKGDS1A	344	
170	5/8/2012 14:45	211	199	12	620-BKGDS1A	344	
171	5/8/2012 14:45	167	199	-32	620-BKGDS1A	344	
172	5/8/2012 14:45	213	199	14	620-BKGDS1A	344	
173	5/8/2012 14:45	112	199	-87	620-BKGDS1A	344	
174	5/8/2012 14:45	174	199	-25	620-BKGDS1A	344	
175	5/8/2012 14:46	162	199	-37	620-BKGDS1A	344	
176	5/8/2012 14:46	172	199	-27	620-BKGDS1A	344	
177	5/8/2012 14:46	225	199	26	620-BKGDS1A	344	
178	5/8/2012 14:46	187	199	-12	620-BKGDS1A	344	
179	5/8/2012 14:46	240	199	41	620-BKGDS1A	344	
180	5/8/2012 14:46	212	199	13	620-BKGDS1A	344	
181	5/8/2012 14:46	215	199	16	620-BKGDS1A	344	
182	5/8/2012 14:46	174	199	-25	620-BKGDS1A	344	
183	5/8/2012 14:46	209	199	10	620-BKGDS1A	344	
184	5/8/2012 14:47	206	199	7	620-BKGDS1A	344	
185	5/8/2012 14:47	267	199	68	620-BKGDS1A	344	
186	5/8/2012 14:47	261	199	62	620-BKGDS1A	344	
187	5/8/2012 14:47	201	199	2	620-BKGDS1A	344	
188	5/8/2012 14:47	195	199	-4	620-BKGDS1A	344	
189	5/8/2012 14:47	195	199	-4	620-BKGDS1A	344	
190	5/8/2012 14:47	200	199	1	620-BKGDS1A	344	
191	5/8/2012 14:47	199	199	0	620-BKGDS1A	344	
192	5/8/2012 14:48	196	199	-3	620-BKGDS1A	344	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 23 Class: 1 Area: 469.07 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
193	5/8/2012 14:48	223	199	24	620-BKGDS1A	344	
194	5/8/2012 14:48	227	199	28	620-BKGDS1A	344	
195	5/8/2012 14:48	223	199	24	620-BKGDS1A	344	
196	5/8/2012 14:48	195	199	-4	620-BKGDS1A	344	
197	5/8/2012 14:48	139	199	-60	620-BKGDS1A	344	
198	5/8/2012 14:48	182	199	-17	620-BKGDS1A	344	
199	5/8/2012 14:48	153	199	-46	620-BKGDS1A	344	
200	5/8/2012 14:48	182	199	-17	620-BKGDS1A	344	
201	5/8/2012 14:49	75	199	-124	620-BKGDS1A	344	
202	5/8/2012 14:49	150	199	-49	620-BKGDS1A	344	
203	5/8/2012 14:49	182	199	-17	620-BKGDS1A	344	
204	5/8/2012 14:49	215	199	16	620-BKGDS1A	344	
205	5/8/2012 14:49	204	199	5	620-BKGDS1A	344	
206	5/8/2012 14:49	222	199	23	620-BKGDS1A	344	
207	5/8/2012 14:50	220	199	21	620-BKGDS1A	344	
208	5/8/2012 14:50	157	199	-42	620-BKGDS1A	344	
209	5/8/2012 14:50	181	199	-18	620-BKGDS1A	344	
210	5/8/2012 14:50	223	199	24	620-BKGDS1A	344	
211	5/8/2012 14:50	249	199	50	620-BKGDS1A	344	
212	5/8/2012 14:50	252	199	53	620-BKGDS1A	344	
213	5/8/2012 14:50	202	199	3	620-BKGDS1A	344	
214	5/8/2012 14:50	235	199	36	620-BKGDS1A	344	
215	5/8/2012 14:50	262	199	63	620-BKGDS1A	344	
216	5/8/2012 14:51	219	199	20	620-BKGDS1A	344	
217	5/8/2012 14:51	186	199	-13	620-BKGDS1A	344	
218	5/8/2012 14:51	182	199	-17	620-BKGDS1A	344	
219	5/8/2012 14:51	244	199	45	620-BKGDS1A	344	
220	5/8/2012 14:51	220	199	21	620-BKGDS1A	344	
221	5/8/2012 14:51	152	199	-47	620-BKGDS1A	344	
222	5/8/2012 14:51	170	199	-29	620-BKGDS1A	344	
223	5/8/2012 14:51	178	199	-21	620-BKGDS1A	344	
224	5/8/2012 14:52	227	199	28	620-BKGDS1A	344	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 23 Class: 1 Area: 469.07 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
225	5/8/2012 14:52	197	199	-2	620-BKGDS1A	344	
226	5/8/2012 14:52	188	199	-11	620-BKGDS1A	344	
227	5/8/2012 14:52	191	199	-8	620-BKGDS1A	344	
228	5/8/2012 14:52	184	199	-15	620-BKGDS1A	344	
229	5/8/2012 14:52	207	199	8	620-BKGDS1A	344	
230	5/8/2012 14:52	201	199	2	620-BKGDS1A	344	
231	5/8/2012 14:52	222	199	23	620-BKGDS1A	344	
232	5/8/2012 14:52	221	199	22	620-BKGDS1A	344	
233	5/8/2012 14:53	244	199	45	620-BKGDS1A	344	
234	5/8/2012 14:53	209	199	10	620-BKGDS1A	344	
235	5/8/2012 14:53	171	199	-28	620-BKGDS1A	344	
236	5/8/2012 14:53	235	199	36	620-BKGDS1A	344	
237	5/8/2012 14:53	269	199	70	620-BKGDS1A	344	
238	5/8/2012 14:53	222	199	23	620-BKGDS1A	344	
239	5/8/2012 14:53	158	199	-41	620-BKGDS1A	344	
240	5/8/2012 14:53	181	199	-18	620-BKGDS1A	344	
241	5/8/2012 14:53	184	199	-15	620-BKGDS1A	344	
242	5/8/2012 14:54	179	199	-20	620-BKGDS1A	344	
243	5/8/2012 14:54	188	199	-11	620-BKGDS1A	344	
244	5/8/2012 14:54	213	199	14	620-BKGDS1A	344	
245	5/8/2012 14:54	179	199	-20	620-BKGDS1A	344	
246	5/8/2012 14:54	188	199	-11	620-BKGDS1A	344	
247	5/8/2012 14:54	218	199	19	620-BKGDS1A	344	
248	5/8/2012 14:54	195	199	-4	620-BKGDS1A	344	
249	5/8/2012 14:54	182	199	-17	620-BKGDS1A	344	
250	5/8/2012 14:55	267	199	68	620-BKGDS1A	344	
251	5/8/2012 14:55	129	199	-70	620-BKGDS1A	344	
252	5/8/2012 14:56	165	199	-34	620-BKGDS1A	344	
253	5/8/2012 14:56	177	199	-22	620-BKGDS1A	344	
254	5/8/2012 14:56	180	199	-19	620-BKGDS1A	344	
255	5/8/2012 14:56	162	199	-37	620-BKGDS1A	344	
256	5/8/2012 14:56	142	199	-57	620-BKGDS1A	344	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 23 Class: 1 Area: 469.07 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
257	5/8/2012 14:56	166	199	-33	620-BKGDS1A	344	
258	5/8/2012 14:56	229	199	30	620-BKGDS1A	344	
259	5/8/2012 14:56	253	199	54	620-BKGDS1A	344	
260	5/8/2012 14:56	165	199	-34	620-BKGDS1A	344	
261	5/8/2012 14:57	176	199	-23	620-BKGDS1A	344	
262	5/8/2012 14:57	130	199	-69	620-BKGDS1A	344	
263	5/8/2012 14:57	232	199	33	620-BKGDS1A	344	
264	5/8/2012 14:57	234	199	35	620-BKGDS1A	344	
265	5/8/2012 14:57	261	199	62	620-BKGDS1A	344	
266	5/8/2012 14:57	171	199	-28	620-BKGDS1A	344	
267	5/8/2012 14:57	161	199	-38	620-BKGDS1A	344	
268	5/8/2012 14:57	214	199	15	620-BKGDS1A	344	
269	5/8/2012 14:58	175	199	-24	620-BKGDS1A	344	
270	5/8/2012 14:58	190	199	-9	620-BKGDS1A	344	
271	5/8/2012 14:58	192	199	-7	620-BKGDS1A	344	
272	5/8/2012 14:58	192	199	-7	620-BKGDS1A	344	
273	5/8/2012 14:58	159	199	-40	620-BKGDS1A	344	
274	5/8/2012 14:58	223	199	24	620-BKGDS1A	344	
275	5/8/2012 14:58	153	199	-46	620-BKGDS1A	344	
276	5/8/2012 14:58	174	199	-25	620-BKGDS1A	344	
277	5/8/2012 14:58	185	199	-14	620-BKGDS1A	344	
278	5/8/2012 14:59	194	199	-5	620-BKGDS1A	344	
279	5/8/2012 14:59	232	199	33	620-BKGDS1A	344	
280	5/8/2012 14:59	203	199	4	620-BKGDS1A	344	
281	5/8/2012 14:59	245	199	46	620-BKGDS1A	344	
282	5/8/2012 14:59	235	199	36	620-BKGDS1A	344	
283	5/8/2012 14:59	221	199	22	620-BKGDS1A	344	
284	5/8/2012 14:59	283	199	84	620-BKGDS1A	344	
285	5/8/2012 14:59	225	199	26	620-BKGDS1A	344	
286	5/8/2012 14:59	236	199	37	620-BKGDS1A	344	
287	5/8/2012 15:00	235	199	36	620-BKGDS1A	344	
288	5/8/2012 15:00	220	199	21	620-BKGDS1A	344	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 23 Class: 1 Area: 469.07 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
289	5/8/2012 15:00	182	199	-17	620-BKGDS1A	344	
290	5/8/2012 15:00	182	199	-17	620-BKGDS1A	344	
291	5/8/2012 15:00	195	199	-4	620-BKGDS1A	344	
292	5/8/2012 15:00	169	199	-30	620-BKGDS1A	344	
293	5/8/2012 15:00	218	199	19	620-BKGDS1A	344	
294	5/8/2012 15:00	220	199	21	620-BKGDS1A	344	
295	5/8/2012 15:01	207	199	8	620-BKGDS1A	344	
296	5/8/2012 15:01	258	199	59	620-BKGDS1A	344	
297	5/8/2012 15:01	227	199	28	620-BKGDS1A	344	
298	5/8/2012 15:01	276	199	77	620-BKGDS1A	344	
299	5/8/2012 15:01	216	199	17	620-BKGDS1A	344	
300	5/8/2012 15:01	226	199	27	620-BKGDS1A	344	
301	5/8/2012 15:01	75	199	-124	620-BKGDS1A	344	
302	5/8/2012 15:02	125	199	-74	620-BKGDS1A	344	
303	5/8/2012 15:02	139	199	-60	620-BKGDS1A	344	
304	5/8/2012 15:02	192	199	-7	620-BKGDS1A	344	
305	5/8/2012 15:02	195	199	-4	620-BKGDS1A	344	
306	5/8/2012 15:02	168	199	-31	620-BKGDS1A	344	
307	5/8/2012 15:02	216	199	17	620-BKGDS1A	344	
308	5/8/2012 15:02	218	199	19	620-BKGDS1A	344	
309	5/8/2012 15:02	215	199	16	620-BKGDS1A	344	
310	5/8/2012 15:03	195	199	-4	620-BKGDS1A	344	
311	5/8/2012 15:03	169	199	-30	620-BKGDS1A	344	
312	5/8/2012 15:03	245	199	46	620-BKGDS1A	344	
313	5/8/2012 15:03	222	199	23	620-BKGDS1A	344	
314	5/8/2012 15:03	191	199	-8	620-BKGDS1A	344	
315	5/8/2012 15:03	194	199	-5	620-BKGDS1A	344	
316	5/8/2012 15:03	264	199	65	620-BKGDS1A	344	
317	5/8/2012 15:03	221	199	22	620-BKGDS1A	344	
318	5/8/2012 15:03	221	199	22	620-BKGDS1A	344	
319	5/8/2012 15:04	187	199	-12	620-BKGDS1A	344	
320	5/8/2012 15:04	124	199	-75	620-BKGDS1A	344	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 23 Class: 1 Area: 469.07 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
321	5/8/2012 15:04	170	199	-29	620-BKGDS1A	344	
322	5/8/2012 15:04	205	199	6	620-BKGDS1A	344	
323	5/8/2012 15:04	235	199	36	620-BKGDS1A	344	
324	5/8/2012 15:04	200	199	1	620-BKGDS1A	344	
325	5/8/2012 15:04	158	199	-41	620-BKGDS1A	344	
326	5/8/2012 15:04	218	199	19	620-BKGDS1A	344	
327	5/8/2012 15:05	212	199	13	620-BKGDS1A	344	
328	5/8/2012 15:05	200	199	1	620-BKGDS1A	344	
329	5/8/2012 15:05	261	199	62	620-BKGDS1A	344	
330	5/8/2012 15:05	244	199	45	620-BKGDS1A	344	
331	5/8/2012 15:05	195	199	-4	620-BKGDS1A	344	
332	5/8/2012 15:05	139	199	-60	620-BKGDS1A	344	
333	5/8/2012 15:05	214	199	15	620-BKGDS1A	344	
334	5/8/2012 15:05	178	199	-21	620-BKGDS1A	344	
335	5/8/2012 15:05	167	199	-32	620-BKGDS1A	344	
336	5/8/2012 15:06	138	199	-61	620-BKGDS1A	344	
337	5/8/2012 15:06	175	199	-24	620-BKGDS1A	344	
338	5/8/2012 15:06	212	199	13	620-BKGDS1A	344	
339	5/8/2012 15:06	200	199	1	620-BKGDS1A	344	
340	5/8/2012 15:06	223	199	24	620-BKGDS1A	344	
341	5/8/2012 15:06	264	199	65	620-BKGDS1A	344	
342	5/8/2012 15:06	247	199	48	620-BKGDS1A	344	
343	5/8/2012 15:06	277	199	78	620-BKGDS1A	344	
344	5/8/2012 15:06	287	199	88	620-BKGDS1A	344	
345	5/8/2012 15:07	216	199	17	620-BKGDS1A	344	
346	5/8/2012 15:07	211	199	12	620-BKGDS1A	344	
347	5/8/2012 15:07	198	199	-1	620-BKGDS1A	344	
348	5/8/2012 15:07	162	199	-37	620-BKGDS1A	344	
349	5/8/2012 15:07	168	199	-31	620-BKGDS1A	344	
350	5/8/2012 15:07	132	199	-67	620-BKGDS1A	344	
351	5/8/2012 15:07	76	199	-123	620-BKGDS1A	344	
352	5/8/2012 15:08	79	199	-120	620-BKGDS1A	344	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 23 Class: 1 Area: 469.07 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
353	5/8/2012 15:08	155	199	-44	620-BKGDS1A	344	
354	5/8/2012 15:08	240	199	41	620-BKGDS1A	344	
355	5/8/2012 15:08	218	199	19	620-BKGDS1A	344	
356	5/8/2012 15:08	287	199	88	620-BKGDS1A	344	
357	5/8/2012 15:08	180	199	-19	620-BKGDS1A	344	
358	5/8/2012 15:08	237	199	38	620-BKGDS1A	344	
359	5/8/2012 15:08	193	199	-6	620-BKGDS1A	344	
360	5/8/2012 15:09	173	199	-26	620-BKGDS1A	344	
361	5/8/2012 15:09	219	199	20	620-BKGDS1A	344	
362	5/8/2012 15:09	187	199	-12	620-BKGDS1A	344	
363	5/8/2012 15:09	165	199	-34	620-BKGDS1A	344	
364	5/8/2012 15:09	190	199	-9	620-BKGDS1A	344	
365	5/8/2012 15:09	180	199	-19	620-BKGDS1A	344	
366	5/8/2012 15:09	172	199	-27	620-BKGDS1A	344	
367	5/8/2012 15:09	202	199	3	620-BKGDS1A	344	
368	5/8/2012 15:09	176	199	-23	620-BKGDS1A	344	
369	5/8/2012 15:10	198	199	-1	620-BKGDS1A	344	
370	5/8/2012 15:10	154	199	-45	620-BKGDS1A	344	
371	5/8/2012 15:10	168	199	-31	620-BKGDS1A	344	
372	5/8/2012 15:10	212	199	13	620-BKGDS1A	344	
373	5/8/2012 15:10	231	199	32	620-BKGDS1A	344	
374	5/8/2012 15:10	269	199	70	620-BKGDS1A	344	
375	5/8/2012 15:10	181	199	-18	620-BKGDS1A	344	
376	5/8/2012 15:10	161	199	-38	620-BKGDS1A	344	
377	5/8/2012 15:11	177	199	-22	620-BKGDS1A	344	
378	5/8/2012 15:11	183	199	-16	620-BKGDS1A	344	
379	5/8/2012 15:11	152	199	-47	620-BKGDS1A	344	
380	5/8/2012 15:11	162	199	-37	620-BKGDS1A	344	
381	5/8/2012 15:11	145	199	-54	620-BKGDS1A	344	
382	5/8/2012 15:11	156	199	-43	620-BKGDS1A	344	
383	5/8/2012 15:11	217	199	18	620-BKGDS1A	344	
384	5/8/2012 15:11	170	199	-29	620-BKGDS1A	344	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 23 Class: 1 Area: 469.07 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
385	5/8/2012 15:11	202	199	3	620-BKGDS1A	344	
386	5/8/2012 15:12	205	199	6	620-BKGDS1A	344	
387	5/8/2012 15:12	156	199	-43	620-BKGDS1A	344	
388	5/8/2012 15:12	163	199	-36	620-BKGDS1A	344	
389	5/8/2012 15:12	149	199	-50	620-BKGDS1A	344	
390	5/8/2012 15:12	180	199	-19	620-BKGDS1A	344	
391	5/8/2012 15:12	150	199	-49	620-BKGDS1A	344	
392	5/8/2012 15:12	165	199	-34	620-BKGDS1A	344	
393	5/8/2012 15:12	188	199	-11	620-BKGDS1A	344	
394	5/8/2012 15:13	228	199	29	620-BKGDS1A	344	
395	5/8/2012 15:13	227	199	28	620-BKGDS1A	344	
396	5/8/2012 15:13	228	199	29	620-BKGDS1A	344	
397	5/8/2012 15:13	228	199	29	620-BKGDS1A	344	
398	5/8/2012 15:13	190	199	-9	620-BKGDS1A	344	
399	5/8/2012 15:13	221	199	22	620-BKGDS1A	344	
400	5/8/2012 15:13	219	199	20	620-BKGDS1A	344	
401	5/9/2012 7:36	47	199	-152	620-BKGDS1A	344	
402	5/9/2012 7:36	96	199	-103	620-BKGDS1A	344	
403	5/9/2012 7:36	150	199	-49	620-BKGDS1A	344	
404	5/9/2012 7:36	167	199	-32	620-BKGDS1A	344	
405	5/9/2012 7:36	102	199	-97	620-BKGDS1A	344	
406	5/9/2012 7:37	110	199	-89	620-BKGDS1A	344	
407	5/9/2012 7:37	206	199	7	620-BKGDS1A	344	
408	5/9/2012 7:37	176	199	-23	620-BKGDS1A	344	
409	5/9/2012 7:37	184	199	-15	620-BKGDS1A	344	
410	5/9/2012 7:37	225	199	26	620-BKGDS1A	344	
411	5/9/2012 7:37	180	199	-19	620-BKGDS1A	344	
412	5/9/2012 7:37	189	199	-10	620-BKGDS1A	344	
413	5/9/2012 7:37	169	199	-30	620-BKGDS1A	344	
414	5/9/2012 7:37	200	199	1	620-BKGDS1A	344	
415	5/9/2012 7:38	167	199	-32	620-BKGDS1A	344	
416	5/9/2012 7:38	216	199	17	620-BKGDS1A	344	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 23 Class: 1 Area: 469.07 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
417	5/9/2012 7:38	249	199	50	620-BKGDS1A	344	
418	5/9/2012 7:38	241	199	42	620-BKGDS1A	344	
419	5/9/2012 7:38	221	199	22	620-BKGDS1A	344	
420	5/9/2012 7:38	231	199	32	620-BKGDS1A	344	
421	5/9/2012 7:38	231	199	32	620-BKGDS1A	344	
422	5/9/2012 7:38	270	199	71	620-BKGDS1A	344	
423	5/9/2012 7:39	251	199	52	620-BKGDS1A	344	
424	5/9/2012 7:39	252	199	53	620-BKGDS1A	344	
425	5/9/2012 7:39	202	199	3	620-BKGDS1A	344	
426	5/9/2012 7:39	244	199	45	620-BKGDS1A	344	
427	5/9/2012 7:39	228	199	29	620-BKGDS1A	344	
428	5/9/2012 7:39	196	199	-3	620-BKGDS1A	344	
429	5/9/2012 7:39	184	199	-15	620-BKGDS1A	344	
430	5/9/2012 7:39	224	199	25	620-BKGDS1A	344	
431	5/9/2012 7:39	249	199	50	620-BKGDS1A	344	
432	5/9/2012 7:40	214	199	15	620-BKGDS1A	344	
433	5/9/2012 7:40	189	199	-10	620-BKGDS1A	344	
434	5/9/2012 7:40	222	199	23	620-BKGDS1A	344	
435	5/9/2012 7:40	259	199	60	620-BKGDS1A	344	
436	5/9/2012 7:40	255	199	56	620-BKGDS1A	344	
437	5/9/2012 7:40	233	199	34	620-BKGDS1A	344	
438	5/9/2012 7:40	209	199	10	620-BKGDS1A	344	
439	5/9/2012 7:40	223	199	24	620-BKGDS1A	344	
440	5/9/2012 7:41	255	199	56	620-BKGDS1A	344	
441	5/9/2012 7:41	197	199	-2	620-BKGDS1A	344	
442	5/9/2012 7:41	229	199	30	620-BKGDS1A	344	
443	5/9/2012 7:41	285	199	86	620-BKGDS1A	344	
444	5/9/2012 7:41	238	199	39	620-BKGDS1A	344	
445	5/9/2012 7:41	178	199	-21	620-BKGDS1A	344	
446	5/9/2012 7:41	164	199	-35	620-BKGDS1A	344	
447	5/9/2012 7:41	183	199	-16	620-BKGDS1A	344	
448	5/9/2012 7:41	211	199	12	620-BKGDS1A	344	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 23 Class: 1 Area: 469.07 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
449	5/9/2012 7:42	195	199	-4	620-BKGDS1A	344	
450	5/9/2012 7:42	212	199	13	620-BKGDS1A	344	
451	5/9/2012 7:42	114	199	-85	620-BKGDS1A	344	
452	5/9/2012 7:42	191	199	-8	620-BKGDS1A	344	
453	5/9/2012 7:42	170	199	-29	620-BKGDS1A	344	
454	5/9/2012 7:42	155	199	-44	620-BKGDS1A	344	
455	5/9/2012 7:43	142	199	-57	620-BKGDS1A	344	
456	5/9/2012 7:43	208	199	9	620-BKGDS1A	344	
457	5/9/2012 7:43	174	199	-25	620-BKGDS1A	344	
458	5/9/2012 7:43	181	199	-18	620-BKGDS1A	344	
459	5/9/2012 7:43	172	199	-27	620-BKGDS1A	344	
460	5/9/2012 7:43	246	199	47	620-BKGDS1A	344	
461	5/9/2012 7:43	184	199	-15	620-BKGDS1A	344	
462	5/9/2012 7:43	245	199	46	620-BKGDS1A	344	
463	5/9/2012 7:44	229	199	30	620-BKGDS1A	344	
464	5/9/2012 7:44	183	199	-16	620-BKGDS1A	344	
465	5/9/2012 7:44	205	199	6	620-BKGDS1A	344	
466	5/9/2012 7:44	147	199	-52	620-BKGDS1A	344	
467	5/9/2012 7:44	178	199	-21	620-BKGDS1A	344	
468	5/9/2012 7:44	286	199	87	620-BKGDS1A	344	
469	5/9/2012 7:44	209	199	10	620-BKGDS1A	344	
470	5/9/2012 7:44	242	199	43	620-BKGDS1A	344	
471	5/9/2012 7:44	232	199	33	620-BKGDS1A	344	
472	5/9/2012 7:45	232	199	33	620-BKGDS1A	344	
473	5/9/2012 7:45	207	199	8	620-BKGDS1A	344	
474	5/9/2012 7:45	192	199	-7	620-BKGDS1A	344	
475	5/9/2012 7:45	214	199	15	620-BKGDS1A	344	
476	5/9/2012 7:45	222	199	23	620-BKGDS1A	344	
477	5/9/2012 7:45	196	199	-3	620-BKGDS1A	344	
478	5/9/2012 7:45	219	199	20	620-BKGDS1A	344	
479	5/9/2012 7:45	166	199	-33	620-BKGDS1A	344	
480	5/9/2012 7:46	170	199	-29	620-BKGDS1A	344	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 23 Class: 1 Area: 469.07 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
481	5/9/2012 7:46	165	199	-34	620-BKGDS1A	344	
482	5/9/2012 7:46	173	199	-26	620-BKGDS1A	344	
483	5/9/2012 7:46	177	199	-22	620-BKGDS1A	344	
484	5/9/2012 7:46	218	199	19	620-BKGDS1A	344	
485	5/9/2012 7:46	215	199	16	620-BKGDS1A	344	
486	5/9/2012 7:46	210	199	11	620-BKGDS1A	344	
487	5/9/2012 7:46	180	199	-19	620-BKGDS1A	344	
488	5/9/2012 7:46	235	199	36	620-BKGDS1A	344	
489	5/9/2012 7:47	243	199	44	620-BKGDS1A	344	
490	5/9/2012 7:47	141	199	-58	620-BKGDS1A	344	
491	5/9/2012 7:47	165	199	-34	620-BKGDS1A	344	
492	5/9/2012 7:47	173	199	-26	620-BKGDS1A	344	
493	5/9/2012 7:47	184	199	-15	620-BKGDS1A	344	
494	5/9/2012 7:47	207	199	8	620-BKGDS1A	344	
495	5/9/2012 7:47	204	199	5	620-BKGDS1A	344	
496	5/9/2012 7:47	145	199	-54	620-BKGDS1A	344	
497	5/9/2012 7:47	150	199	-49	620-BKGDS1A	344	
498	5/9/2012 7:48	209	199	10	620-BKGDS1A	344	
499	5/9/2012 7:48	217	199	18	620-BKGDS1A	344	
500	5/9/2012 7:48	203	199	4	620-BKGDS1A	344	
501	5/9/2012 7:48	91	199	-108	620-BKGDS1A	344	
502	5/9/2012 7:48	152	199	-47	620-BKGDS1A	344	
503	5/9/2012 7:48	155	199	-44	620-BKGDS1A	344	
504	5/9/2012 7:49	253	199	54	620-BKGDS1A	344	
505	5/9/2012 7:49	239	199	40	620-BKGDS1A	344	
506	5/9/2012 7:49	225	199	26	620-BKGDS1A	344	
507	5/9/2012 7:49	215	199	16	620-BKGDS1A	344	
508	5/9/2012 7:49	207	199	8	620-BKGDS1A	344	
509	5/9/2012 7:49	287	199	88	620-BKGDS1A	344	
510	5/9/2012 7:49	237	199	38	620-BKGDS1A	344	
511	5/9/2012 7:49	178	199	-21	620-BKGDS1A	344	
512	5/9/2012 7:49	121	199	-78	620-BKGDS1A	344	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 23 Class: 1 Area: 469.07 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
513	5/9/2012 7:50	144	199	-55	620-BKGDS1A	344	
514	5/9/2012 7:50	169	199	-30	620-BKGDS1A	344	
515	5/9/2012 7:50	175	199	-24	620-BKGDS1A	344	
516	5/9/2012 7:50	210	199	11	620-BKGDS1A	344	
517	5/9/2012 7:50	227	199	28	620-BKGDS1A	344	
518	5/9/2012 7:50	209	199	10	620-BKGDS1A	344	
519	5/9/2012 7:50	182	199	-17	620-BKGDS1A	344	
520	5/9/2012 7:50	188	199	-11	620-BKGDS1A	344	
521	5/9/2012 7:51	229	199	30	620-BKGDS1A	344	
522	5/9/2012 7:51	223	199	24	620-BKGDS1A	344	
523	5/9/2012 7:51	245	199	46	620-BKGDS1A	344	
524	5/9/2012 7:51	270	199	71	620-BKGDS1A	344	
525	5/9/2012 7:51	239	199	40	620-BKGDS1A	344	
526	5/9/2012 7:51	297	199	98	620-BKGDS1A	344	
527	5/9/2012 7:51	204	199	5	620-BKGDS1A	344	
528	5/9/2012 7:51	207	199	8	620-BKGDS1A	344	
529	5/9/2012 7:51	272	199	73	620-BKGDS1A	344	
530	5/9/2012 7:52	289	199	90	620-BKGDS1A	344	
531	5/9/2012 7:52	299	199	100	620-BKGDS1A	344	
532	5/9/2012 7:52	276	199	77	620-BKGDS1A	344	
533	5/9/2012 7:52	242	199	43	620-BKGDS1A	344	
534	5/9/2012 7:52	219	199	20	620-BKGDS1A	344	
535	5/9/2012 7:52	215	199	16	620-BKGDS1A	344	
536	5/9/2012 7:52	202	199	3	620-BKGDS1A	344	
537	5/9/2012 7:52	204	199	5	620-BKGDS1A	344	
538	5/9/2012 7:52	204	199	5	620-BKGDS1A	344	
539	5/9/2012 7:53	148	199	-51	620-BKGDS1A	344	
540	5/9/2012 7:53	175	199	-24	620-BKGDS1A	344	
541	5/9/2012 7:53	124	199	-75	620-BKGDS1A	344	
542	5/9/2012 7:53	181	199	-18	620-BKGDS1A	344	
543	5/9/2012 7:53	183	199	-16	620-BKGDS1A	344	
544	5/9/2012 7:53	258	199	59	620-BKGDS1A	344	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 23 Class: 1 Area: 469.07 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
545	5/9/2012 7:53	225	199	26	620-BKGDS1A	344	
546	5/9/2012 7:53	192	199	-7	620-BKGDS1A	344	
547	5/9/2012 7:54	136	199	-63	620-BKGDS1A	344	
548	5/9/2012 7:54	163	199	-36	620-BKGDS1A	344	
549	5/9/2012 7:54	137	199	-62	620-BKGDS1A	344	
550	5/9/2012 7:54	172	199	-27	620-BKGDS1A	344	
551	5/9/2012 7:54	122	199	-77	620-BKGDS1A	344	
552	5/9/2012 7:54	181	199	-18	620-BKGDS1A	344	
553	5/9/2012 7:55	215	199	16	620-BKGDS1A	344	
554	5/9/2012 7:55	208	199	9	620-BKGDS1A	344	
555	5/9/2012 7:55	158	199	-41	620-BKGDS1A	344	
556	5/9/2012 7:55	140	199	-59	620-BKGDS1A	344	
557	5/9/2012 7:55	130	199	-69	620-BKGDS1A	344	
558	5/9/2012 7:55	105	199	-94	620-BKGDS1A	344	
559	5/9/2012 7:55	219	199	20	620-BKGDS1A	344	
560	5/9/2012 7:55	190	199	-9	620-BKGDS1A	344	
561	5/9/2012 7:55	138	199	-61	620-BKGDS1A	344	
562	5/9/2012 7:56	163	199	-36	620-BKGDS1A	344	
563	5/9/2012 7:56	221	199	22	620-BKGDS1A	344	
564	5/9/2012 7:56	203	199	4	620-BKGDS1A	344	
565	5/9/2012 7:56	186	199	-13	620-BKGDS1A	344	
566	5/9/2012 7:56	217	199	18	620-BKGDS1A	344	
567	5/9/2012 7:56	220	199	21	620-BKGDS1A	344	
568	5/9/2012 7:56	171	199	-28	620-BKGDS1A	344	
569	5/9/2012 7:56	191	199	-8	620-BKGDS1A	344	
570	5/9/2012 7:57	225	199	26	620-BKGDS1A	344	
571	5/9/2012 7:57	255	199	56	620-BKGDS1A	344	
572	5/9/2012 7:57	263	199	64	620-BKGDS1A	344	
573	5/9/2012 7:57	238	199	39	620-BKGDS1A	344	
574	5/9/2012 7:57	207	199	8	620-BKGDS1A	344	
575	5/9/2012 7:57	246	199	47	620-BKGDS1A	344	
576	5/9/2012 7:57	214	199	15	620-BKGDS1A	344	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 23 Class: 1 Area: 469.07 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
577	5/9/2012 7:57	174	199	-25	620-BKGDS1A	344	
578	5/9/2012 7:57	170	199	-29	620-BKGDS1A	344	
579	5/9/2012 7:58	175	199	-24	620-BKGDS1A	344	
580	5/9/2012 7:58	184	199	-15	620-BKGDS1A	344	
581	5/9/2012 7:58	197	199	-2	620-BKGDS1A	344	
582	5/9/2012 7:58	195	199	-4	620-BKGDS1A	344	
583	5/9/2012 7:58	226	199	27	620-BKGDS1A	344	
584	5/9/2012 7:58	224	199	25	620-BKGDS1A	344	
585	5/9/2012 7:58	195	199	-4	620-BKGDS1A	344	
586	5/9/2012 7:58	168	199	-31	620-BKGDS1A	344	
587	5/9/2012 7:59	204	199	5	620-BKGDS1A	344	
588	5/9/2012 7:59	208	199	9	620-BKGDS1A	344	
589	5/9/2012 7:59	193	199	-6	620-BKGDS1A	344	
590	5/9/2012 7:59	140	199	-59	620-BKGDS1A	344	
591	5/9/2012 7:59	194	199	-5	620-BKGDS1A	344	
592	5/9/2012 7:59	189	199	-10	620-BKGDS1A	344	
593	5/9/2012 7:59	184	199	-15	620-BKGDS1A	344	
594	5/9/2012 7:59	169	199	-30	620-BKGDS1A	344	
595	5/9/2012 7:59	211	199	12	620-BKGDS1A	344	
596	5/9/2012 8:00	180	199	-19	620-BKGDS1A	344	
597	5/9/2012 8:00	177	199	-22	620-BKGDS1A	344	
598	5/9/2012 8:00	177	199	-22	620-BKGDS1A	344	
599	5/9/2012 8:00	215	199	16	620-BKGDS1A	344	
600	5/9/2012 8:00	232	199	33	620-BKGDS1A	344	
601	5/9/2012 8:00	114	199	-85	620-BKGDS1A	344	
602	5/9/2012 8:01	171	199	-28	620-BKGDS1A	344	
603	5/9/2012 8:01	178	199	-21	620-BKGDS1A	344	
604	5/9/2012 8:01	151	199	-48	620-BKGDS1A	344	
605	5/9/2012 8:01	189	199	-10	620-BKGDS1A	344	
606	5/9/2012 8:01	193	199	-6	620-BKGDS1A	344	
607	5/9/2012 8:01	178	199	-21	620-BKGDS1A	344	
608	5/9/2012 8:01	231	199	32	620-BKGDS1A	344	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 23 Class: 1 Area: 469.07 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
609	5/9/2012 8:01	236	199	37	620-BKGDS1A	344	
610	5/9/2012 8:01	227	199	28	620-BKGDS1A	344	
611	5/9/2012 8:02	180	199	-19	620-BKGDS1A	344	
612	5/9/2012 8:02	181	199	-18	620-BKGDS1A	344	
613	5/9/2012 8:02	211	199	12	620-BKGDS1A	344	
614	5/9/2012 8:02	187	199	-12	620-BKGDS1A	344	
615	5/9/2012 8:02	256	199	57	620-BKGDS1A	344	
616	5/9/2012 8:02	168	199	-31	620-BKGDS1A	344	
617	5/9/2012 8:02	134	199	-65	620-BKGDS1A	344	
618	5/9/2012 8:02	221	199	22	620-BKGDS1A	344	
619	5/9/2012 8:03	234	199	35	620-BKGDS1A	344	
620	5/9/2012 8:03	231	199	32	620-BKGDS1A	344	
621	5/9/2012 8:03	190	199	-9	620-BKGDS1A	344	
622	5/9/2012 8:03	179	199	-20	620-BKGDS1A	344	
623	5/9/2012 8:03	153	199	-46	620-BKGDS1A	344	
624	5/9/2012 8:03	191	199	-8	620-BKGDS1A	344	
625	5/9/2012 8:03	175	199	-24	620-BKGDS1A	344	
626	5/9/2012 8:03	149	199	-50	620-BKGDS1A	344	
627	5/9/2012 8:03	205	199	6	620-BKGDS1A	344	
628	5/9/2012 8:04	238	199	39	620-BKGDS1A	344	
629	5/9/2012 8:04	225	199	26	620-BKGDS1A	344	
630	5/9/2012 8:04	210	199	11	620-BKGDS1A	344	
631	5/9/2012 8:04	197	199	-2	620-BKGDS1A	344	
632	5/9/2012 8:04	170	199	-29	620-BKGDS1A	344	
633	5/9/2012 8:04	230	199	31	620-BKGDS1A	344	
634	5/9/2012 8:04	227	199	28	620-BKGDS1A	344	
635	5/9/2012 8:04	195	199	-4	620-BKGDS1A	344	
636	5/9/2012 8:05	202	199	3	620-BKGDS1A	344	
637	5/9/2012 8:05	212	199	13	620-BKGDS1A	344	
638	5/9/2012 8:05	164	199	-35	620-BKGDS1A	344	
639	5/9/2012 8:05	146	199	-53	620-BKGDS1A	344	
640	5/9/2012 8:05	207	199	8	620-BKGDS1A	344	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 23 Class: 1 Area: 469.07 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
641	5/9/2012 8:05	197	199	-2	620-BKGDS1A	344	
642	5/9/2012 8:05	191	199	-8	620-BKGDS1A	344	
643	5/9/2012 8:05	180	199	-19	620-BKGDS1A	344	
644	5/9/2012 8:05	215	199	16	620-BKGDS1A	344	
645	5/9/2012 8:06	151	199	-48	620-BKGDS1A	344	
646	5/9/2012 8:06	193	199	-6	620-BKGDS1A	344	
647	5/9/2012 8:06	288	199	89	620-BKGDS1A	344	
648	5/9/2012 8:06	237	199	38	620-BKGDS1A	344	
649	5/9/2012 8:06	255	199	56	620-BKGDS1A	344	
650	5/9/2012 8:06	272	199	73	620-BKGDS1A	344	
651	5/9/2012 8:07	110	199	-89	620-BKGDS1A	344	
652	5/9/2012 8:07	114	199	-85	620-BKGDS1A	344	
653	5/9/2012 8:07	158	199	-41	620-BKGDS1A	344	
654	5/9/2012 8:07	131	199	-68	620-BKGDS1A	344	
655	5/9/2012 8:07	172	199	-27	620-BKGDS1A	344	
656	5/9/2012 8:07	188	199	-11	620-BKGDS1A	344	
657	5/9/2012 8:07	252	199	53	620-BKGDS1A	344	
658	5/9/2012 8:08	177	199	-22	620-BKGDS1A	344	
659	5/9/2012 8:08	186	199	-13	620-BKGDS1A	344	
660	5/9/2012 8:08	178	199	-21	620-BKGDS1A	344	
661	5/9/2012 8:08	188	199	-11	620-BKGDS1A	344	
662	5/9/2012 8:08	164	199	-35	620-BKGDS1A	344	
663	5/9/2012 8:08	153	199	-46	620-BKGDS1A	344	
664	5/9/2012 8:08	202	199	3	620-BKGDS1A	344	
665	5/9/2012 8:08	207	199	8	620-BKGDS1A	344	
666	5/9/2012 8:09	218	199	19	620-BKGDS1A	344	
667	5/9/2012 8:09	215	199	16	620-BKGDS1A	344	
668	5/9/2012 8:09	199	199	0	620-BKGDS1A	344	
669	5/9/2012 8:09	211	199	12	620-BKGDS1A	344	
670	5/9/2012 8:09	174	199	-25	620-BKGDS1A	344	
671	5/9/2012 8:09	162	199	-37	620-BKGDS1A	344	
672	5/9/2012 8:09	221	199	22	620-BKGDS1A	344	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 23 Class: 1 Area: 469.07 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
673	5/9/2012 8:09	213	199	14	620-BKGDS1A	344	
674	5/9/2012 8:09	203	199	4	620-BKGDS1A	344	
675	5/9/2012 8:10	164	199	-35	620-BKGDS1A	344	
676	5/9/2012 8:10	223	199	24	620-BKGDS1A	344	
677	5/9/2012 8:10	176	199	-23	620-BKGDS1A	344	
678	5/9/2012 8:10	202	199	3	620-BKGDS1A	344	
679	5/9/2012 8:10	143	199	-56	620-BKGDS1A	344	
680	5/9/2012 8:10	153	199	-46	620-BKGDS1A	344	
681	5/9/2012 8:10	152	199	-47	620-BKGDS1A	344	
682	5/9/2012 8:10	203	199	4	620-BKGDS1A	344	
683	5/9/2012 8:10	227	199	28	620-BKGDS1A	344	
684	5/9/2012 8:11	231	199	32	620-BKGDS1A	344	
685	5/9/2012 8:11	226	199	27	620-BKGDS1A	344	
686	5/9/2012 8:11	247	199	48	620-BKGDS1A	344	
687	5/9/2012 8:11	217	199	18	620-BKGDS1A	344	
688	5/9/2012 8:11	169	199	-30	620-BKGDS1A	344	
689	5/9/2012 8:11	188	199	-11	620-BKGDS1A	344	
690	5/9/2012 8:11	165	199	-34	620-BKGDS1A	344	
691	5/9/2012 8:11	183	199	-16	620-BKGDS1A	344	
692	5/9/2012 8:12	196	199	-3	620-BKGDS1A	344	
693	5/9/2012 8:12	202	199	3	620-BKGDS1A	344	
694	5/9/2012 8:12	216	199	17	620-BKGDS1A	344	
695	5/9/2012 8:12	145	199	-54	620-BKGDS1A	344	
696	5/9/2012 8:12	170	199	-29	620-BKGDS1A	344	
697	5/9/2012 8:12	119	199	-80	620-BKGDS1A	344	
698	5/9/2012 8:12	154	199	-45	620-BKGDS1A	344	
699	5/9/2012 8:12	166	199	-33	620-BKGDS1A	344	
700	5/9/2012 8:12	201	199	2	620-BKGDS1A	344	
701	5/9/2012 8:13	132	199	-67	620-BKGDS1A	344	
702	5/9/2012 8:13	111	199	-88	620-BKGDS1A	344	
703	5/9/2012 8:13	169	199	-30	620-BKGDS1A	344	
704	5/9/2012 8:13	181	199	-18	620-BKGDS1A	344	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 23 Class: 1 Area: 469.07 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
705	5/9/2012 8:13	151	199	-48	620-BKGDS1A	344	
706	5/9/2012 8:13	170	199	-29	620-BKGDS1A	344	
707	5/9/2012 8:14	124	199	-75	620-BKGDS1A	344	
708	5/9/2012 8:14	168	199	-31	620-BKGDS1A	344	
709	5/9/2012 8:14	156	199	-43	620-BKGDS1A	344	
710	5/9/2012 8:14	161	199	-38	620-BKGDS1A	344	
711	5/9/2012 8:14	233	199	34	620-BKGDS1A	344	
712	5/9/2012 8:14	203	199	4	620-BKGDS1A	344	
713	5/9/2012 8:14	225	199	26	620-BKGDS1A	344	
714	5/9/2012 8:14	192	199	-7	620-BKGDS1A	344	
715	5/9/2012 8:15	113	199	-86	620-BKGDS1A	344	
716	5/9/2012 8:15	216	199	17	620-BKGDS1A	344	
717	5/9/2012 8:15	195	199	-4	620-BKGDS1A	344	
718	5/9/2012 8:15	158	199	-41	620-BKGDS1A	344	
719	5/9/2012 8:15	185	199	-14	620-BKGDS1A	344	
720	5/9/2012 8:15	161	199	-38	620-BKGDS1A	344	
721	5/9/2012 8:15	204	199	5	620-BKGDS1A	344	
722	5/9/2012 8:15	202	199	3	620-BKGDS1A	344	
723	5/9/2012 8:15	193	199	-6	620-BKGDS1A	344	
724	5/9/2012 8:16	193	199	-6	620-BKGDS1A	344	
725	5/9/2012 8:16	163	199	-36	620-BKGDS1A	344	
726	5/9/2012 8:16	169	199	-30	620-BKGDS1A	344	
727	5/9/2012 8:16	202	199	3	620-BKGDS1A	344	
728	5/9/2012 8:16	189	199	-10	620-BKGDS1A	344	
729	5/9/2012 8:16	229	199	30	620-BKGDS1A	344	
730	5/9/2012 8:16	211	199	12	620-BKGDS1A	344	
731	5/9/2012 8:16	264	199	65	620-BKGDS1A	344	
732	5/9/2012 8:16	229	199	30	620-BKGDS1A	344	
733	5/9/2012 8:17	254	199	55	620-BKGDS1A	344	
734	5/9/2012 8:17	233	199	34	620-BKGDS1A	344	
735	5/9/2012 8:17	182	199	-17	620-BKGDS1A	344	
736	5/9/2012 8:17	201	199	2	620-BKGDS1A	344	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 23 Class: 1 Area: 469.07 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
737	5/9/2012 8:17	253	199	54	620-BKGDS1A	344	
738	5/9/2012 8:17	243	199	44	620-BKGDS1A	344	
739	5/9/2012 8:17	221	199	22	620-BKGDS1A	344	
740	5/9/2012 8:17	281	199	82	620-BKGDS1A	344	
741	5/9/2012 8:18	212	199	13	620-BKGDS1A	344	
742	5/9/2012 8:18	225	199	26	620-BKGDS1A	344	
743	5/9/2012 8:18	208	199	9	620-BKGDS1A	344	
744	5/9/2012 8:18	205	199	6	620-BKGDS1A	344	
745	5/9/2012 8:18	186	199	-13	620-BKGDS1A	344	
746	5/9/2012 8:18	182	199	-17	620-BKGDS1A	344	
747	5/9/2012 8:18	192	199	-7	620-BKGDS1A	344	
748	5/9/2012 8:18	184	199	-15	620-BKGDS1A	344	
749	5/9/2012 8:18	194	199	-5	620-BKGDS1A	344	
750	5/9/2012 8:19	239	199	40	620-BKGDS1A	344	
751	5/9/2012 8:19	109	199	-90	620-BKGDS1A	344	
752	5/9/2012 8:19	226	199	27	620-BKGDS1A	344	
753	5/9/2012 8:19	205	199	6	620-BKGDS1A	344	
754	5/9/2012 8:19	227	199	28	620-BKGDS1A	344	
755	5/9/2012 8:19	247	199	48	620-BKGDS1A	344	
756	5/9/2012 8:20	248	199	49	620-BKGDS1A	344	
757	5/9/2012 8:20	179	199	-20	620-BKGDS1A	344	
758	5/9/2012 8:20	194	199	-5	620-BKGDS1A	344	
759	5/9/2012 8:20	169	199	-30	620-BKGDS1A	344	
760	5/9/2012 8:20	161	199	-38	620-BKGDS1A	344	
761	5/9/2012 8:20	177	199	-22	620-BKGDS1A	344	
762	5/9/2012 8:20	204	199	5	620-BKGDS1A	344	
763	5/9/2012 8:20	200	199	1	620-BKGDS1A	344	
764	5/9/2012 8:21	216	199	17	620-BKGDS1A	344	
765	5/9/2012 8:21	177	199	-22	620-BKGDS1A	344	
766	5/9/2012 8:21	219	199	20	620-BKGDS1A	344	
767	5/9/2012 8:21	200	199	1	620-BKGDS1A	344	
768	5/9/2012 8:21	200	199	1	620-BKGDS1A	344	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 23 Class: 1 Area: 469.07 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
769	5/9/2012 8:21	233	199	34	620-BKGDS1A	344	
770	5/9/2012 8:21	255	199	56	620-BKGDS1A	344	
771	5/9/2012 8:21	229	199	30	620-BKGDS1A	344	
772	5/9/2012 8:21	182	199	-17	620-BKGDS1A	344	
773	5/9/2012 8:22	169	199	-30	620-BKGDS1A	344	
774	5/9/2012 8:22	165	199	-34	620-BKGDS1A	344	
775	5/9/2012 8:22	142	199	-57	620-BKGDS1A	344	
776	5/9/2012 8:22	176	199	-23	620-BKGDS1A	344	
777	5/9/2012 8:22	189	199	-10	620-BKGDS1A	344	
778	5/9/2012 8:22	143	199	-56	620-BKGDS1A	344	
779	5/9/2012 8:22	157	199	-42	620-BKGDS1A	344	
780	5/9/2012 8:22	142	199	-57	620-BKGDS1A	344	
781	5/9/2012 8:23	150	199	-49	620-BKGDS1A	344	
782	5/9/2012 8:23	219	199	20	620-BKGDS1A	344	
783	5/9/2012 8:23	300	199	101	620-BKGDS1A	344	
784	5/9/2012 8:23	229	199	30	620-BKGDS1A	344	
785	5/9/2012 8:23	255	199	56	620-BKGDS1A	344	
786	5/9/2012 8:23	192	199	-7	620-BKGDS1A	344	
787	5/9/2012 8:23	242	199	43	620-BKGDS1A	344	
788	5/9/2012 8:23	298	199	99	620-BKGDS1A	344	
789	5/9/2012 8:23	235	199	36	620-BKGDS1A	344	
790	5/9/2012 8:24	248	199	49	620-BKGDS1A	344	
791	5/9/2012 8:24	226	199	27	620-BKGDS1A	344	
792	5/9/2012 8:24	212	199	13	620-BKGDS1A	344	
793	5/9/2012 8:24	240	199	41	620-BKGDS1A	344	
794	5/9/2012 8:24	195	199	-4	620-BKGDS1A	344	
795	5/9/2012 8:24	226	199	27	620-BKGDS1A	344	
796	5/9/2012 8:24	238	199	39	620-BKGDS1A	344	
797	5/9/2012 8:24	225	199	26	620-BKGDS1A	344	
798	5/9/2012 8:25	213	199	14	620-BKGDS1A	344	
799	5/9/2012 8:25	202	199	3	620-BKGDS1A	344	
800	5/9/2012 8:25	203	199	4	620-BKGDS1A	344	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Scan Measurement Report

Site Area: 707 Survey Unit: 23 Class: 1 Area: 469.07 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
-------	-------------	-----------------------	----------------------------	---------------------	-------------------	------------------------------------	----------

Net Gamma cpm Min: -153

Summary Avg: -3

Max: 101

St Dev: 39

Readings > 3σ investigation level are highlighted in **blue**

* Background ID correlates to instrument reference area background identification number

Gamma measurements > 3σ investigation level are verified by 2360 beta measurements



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: 707 Survey Unit: 23 Class: 1 Area: 469.07 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

2350 Identification #: 620

Instrument/Probe Type: 2350-1 / 20DT06

Instrument Serial #: 228694

Probe Serial #: 091806B

Calibration Due Date: 9/28/2012

Reference Area Background Identification #: 620-BKGDS1A Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	10/13/2011 15:12	168
2	10/13/2011 15:13	176
3	10/13/2011 15:14	169
4	10/13/2011 15:15	178
5	10/13/2011 15:16	162
6	10/13/2011 15:17	168
7	10/13/2011 15:19	198
8	10/13/2011 15:20	190
9	10/13/2011 15:21	169
10	10/13/2011 15:22	282
11	10/13/2011 15:23	192
12	10/13/2011 15:25	230
13	10/13/2011 15:26	196
14	10/13/2011 15:27	165
15	10/13/2011 15:28	291
16	10/13/2011 15:30	147
17	10/13/2011 15:31	166
18	10/13/2011 15:32	168
19	10/13/2011 15:33	290
20	10/13/2011 15:35	284

Gamma Mean Background (cpm): 199

Standard Deviation: 48

Gamma 3 σ Investigation Level (cpm): 344



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Exposure Rate Measurements

Page 1

Site Area: 707 Survey Unit: 23 Class: 1 Area: 469.07 m²

Radioisotopes of Concern (ROCs): Cs137 Pu239 Ra226 Sr90

Instrument Model:	Model 19	Reference Area Background Identification #:	666-BKGDS1
Instrument Serial Number:	91499	Reference Area Background Location:	Parcel D-1 Reference
Instrument Calibration Due Date:	1/15/2013	Exposure Rate Background (μR/hr):	6

Rdg #	Date	Exposure Rate (μR/hr)	Comments
1	6/22/2012	6	Collected at Surface 0" depth
2	6/29/2012	5	
3	7/31/2012	5	
4	7/31/2012	5	
5	7/31/2012	5	
6	7/31/2012	5	
7	7/31/2012	5	
8	7/31/2012	6	
9	7/31/2012	5	
10	7/31/2012	5	
11	7/31/2012	5	
12	7/31/2012	5	
13	7/31/2012	5	
14	7/31/2012	5	
15	7/31/2012	5	
16	7/31/2012	5	
17	7/31/2012	5	
18	7/31/2012	5	
19	7/31/2012	5	
20	7/31/2012	5	
21	7/31/2012	5	
22	7/31/2012	6	
23	7/31/2012	6	
24	7/31/2012	6	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Exposure Rate Measurements

Page 2

Exposure Rate	Min: 5.00
Summary ($\mu\text{R/hr}$)	Avg: 5.21
	Max: 6.00
	St Dev: 0.41



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02485

Project Name Radiological Site Survey		PO Number N/A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section		
Project Location HUNTERS POINT		Project Number 4044-0007		LABORATORY ID				
Sampler Name J. Raft		Airbill Number N/A						
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-758-7592						
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	COMMENTS	LOCATION	SAMPLE ID
03707-S0023-F001-01	6/22/2012	0920	1		S	On-Site Gamma & Off-Site Total Sr	Surface 0" depth	
03707-S0023-F001-02	6/22/2012	0925	1		S	On-Site Gamma & Off-Site Total Sr	Wall 12" depth	
03707-S0023-F001-03	6/22/2012	0930	1		S	On-Site Gamma & Off-Site Total Sr	Bottom 24" depth	

Relinquished by: (signature)	Date	Received by: (signature)	LABORATORY INSTRUCTIONS/COMMENTS	SAMPLING COMMENTS
Company RSR5	Time 1030	Company CAT		707-S002B
Relinquished by: (signature)	Date	Received by: (signature)	COMPOSITE DESCRIPTION	Characterization
Company	Time	Company		
Relinquished by: (signature)	Date	Received by: (signature)	SAMPLE CONDITION (NON-REQUIREMENT FOR LABORATORY)	
Company	Time	Company	TEMPERATURE SAMPLE CONDITION: (OOB/USABLE)	



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

237562

BFS 02492

Project Name Radiological Site Survey		PO Number N/A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section	
Project Location HUNTERS POINT		Project Number 4044-0007		LABORATORY ID			
Sampler Name R. Zohensky		Airbill Number N/A					
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-758-7592					
SAMPLE_ID	DATE	TIME	CONTAINERS	LEVEL	TYPE	COMMENTS	LOCATION
03707-S0023-F002-01	6/29/2012	1310	1		S		for 707-SU22-SP33
						On-Site Gamma & Off-Site Total Sr	
						for 707-SU22-SP33	

Relinquished by: (signature) Company: <i>PSR</i>	Date 6-29-12	Received by: (signature) Company: <i>CIT</i>	LABORATORY INSTRUCTIONS/COMMENTS
Relinquished by: (signature)	Time 15:30	Received by: (signature)	COMPROVED REGISTRATION
Company	Date	Company	SAMPLE CONDITION INFORMATION (FOR LABORATORY USE ONLY) TEMPERATURE: SAMPLE CONDITION: CONTAINER: WALL
Relinquished by: (signature)	Time	Received by: (signature)	
Company	Date	Company	



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

238359
BFS 02522

Project Name Radiological Site Survey		PO Number N/A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section	
Project Location HUNTERS POINT		Project Number 4044-0007		LABORATORY ID [REDACTED]			
Sampler Name J. Rolfe		Airbill Number N/A					
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-758-7592					
SAMPLE_ID	DATE	TIME	CONTAINERS	LEVEL	TYPE	TAT	COMMENTS
03707-S0023-F003-01	7/31/2012	0800	1		S	<input checked="" type="checkbox"/>	
03707-S0023-F004-01	7/31/2012	0805	1		S	<input checked="" type="checkbox"/>	

Received by: (signature) [Signature]		Date 7-31-12		Received by: (signature) [Signature]		LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS 707-S0023 Blased	
Company R.S.R.S.		Time 1256		Company [Signature]		COMPOSITE DESCRIPTION			
Received by: (signature)		Date		Received by: (signature)		SAMPLE CONDITION (FOR RECEIPT) (FOR LABORATORY)			
Company		Time		Company		TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:			
Received by: (signature)		Date		Received by: (signature)					
Company		Time		Company					



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

238360
BFS 02523

Project Name Radiological Site Survey		PO Number N/A		LABORATORY NAME ONSITE - Curtils & Tompkins, LTD.		Project Information Section			
Project Location HUNTERS POINT		Project Number 4044-0007		LABORATORY ID					
Sampler Name J. Rolfe		Airbill Number N/A							
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592							
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	COMMENTS	LOCATION	SAMPLE ID
03707-S0023-F005-01	7/31/2012	0810	1		S				
03707-S0023-F006-01	7/31/2012	0815	1		S				
03707-S0023-F007-01	7/31/2012	0820	1		S				
03707-S0023-F008-01	7/31/2012	0825	1		S				
03707-S0023-F009-01	7/31/2012	0830	1		S				
03707-S0023-F010-01	7/31/2012	0835	1		S				
03707-S0023-F011-01	7/31/2012	0840	1		S				
03707-S0023-F012-01	7/31/2012	0845	1		S				
03707-S0023-F013-01	7/31/2012	0850	1		S				
03707-S0023-F014-01	7/31/2012	0920	1		S				
03707-S0023-F015-01	7/31/2012	0925	1		S				
03707-S0023-F016-01	7/31/2012	0930	1		S				

Relinquished by: <i>[Signature]</i>		Date: 7-31-12	Received by: (signature) <i>[Signature]</i>		LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS	
Company: KRS	Time: 1256		Company: CPT		(COMPOSITE DESCRIPTION)		707-S0023	
Relinquished by: (signature)		Date	Received by: (signature)				Systematic	
Company		Time	Company					
Relinquished by: (signature)		Date	Received by: (signature)		SAMPLE CONDITION/ON RECEIPT (FOR LABORATORY)			
Company		Time	Company		TEMPERATURE; SAMPLING CONDITION; COOLER SEAL;			



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

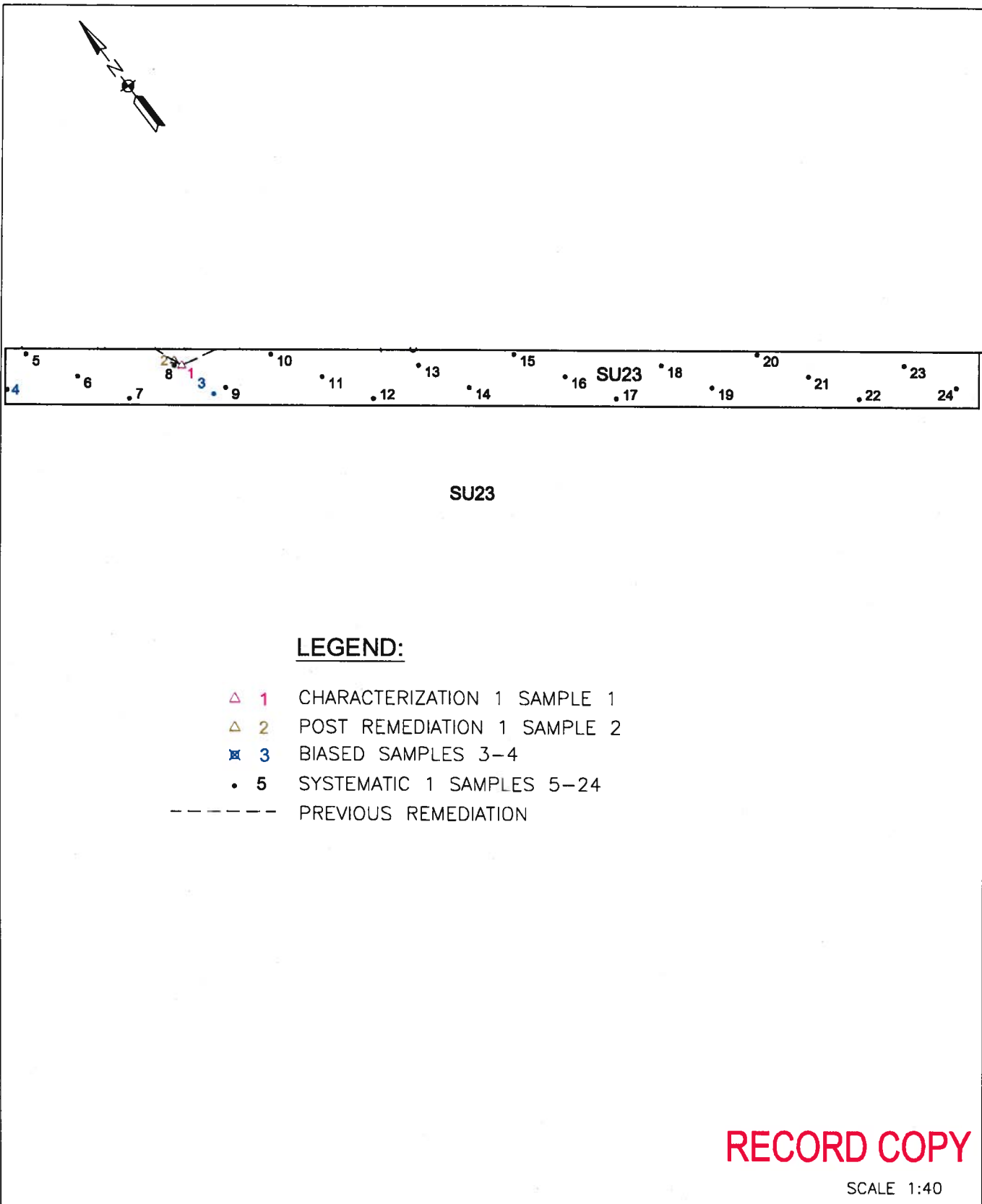
Chain-of-Custody Record

238361
BFS 02524

Project Name Radiological Site Survey		PO Number N/A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section			
Project Location HUNTERS POINT		Project Number 4044-0007		LABORATORY ID					
Sampler Name J. Rolfe		Airbill Number N/A							
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592							
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	COMMENTS	LOCATION	SAMPLE ID
03707-S0023-F017-01	7/31/2012	0935	1		S	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
03707-S0023-F018-01	7/31/2012	0940	1		S	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
03707-S0023-F019-01	7/31/2012	0945	1		S	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
03707-S0023-F020-01	7/31/2012	0950	1		S	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
03707-S0023-F021-01	7/31/2012	0955	1		S	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
03707-S0023-F022-01	7/31/2012	1000	1		S	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
03707-S0023-F023-01	7/31/2012	1005	1		S	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
03707-S0023-F024-01	7/31/2012	1010	1		S	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

Relinquished by: (signature) Company RSR		Date 7-31-12	Received by: (signature) Company C&T	LABORATORY INSTRUCTIONS/COMMENTS COMPOSITE DESCRIPTION SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY) TEMPERATURE: SAMPLE CONDITION: COORDINATE:	SAMPLING COMMENTS 707-S0023 Systematic
Relinquished by: (signature) Company		Time 1256	Received by: (signature) Company		
Relinquished by: (signature) Company		Date	Received by: (signature) Company		
Relinquished by: (signature) Company		Time	Received by: (signature) Company		
Relinquished by: (signature) Company		Date	Received by: (signature) Company		

P:\CTO-03 CAD FILES\DWG FILES\707 SURVEY UNITS\707_SURVEY _10-15-12.DWG
PLOT/UPDATE: OCT 18 2012 14:34:57



HUNTERS POINT SHIPYARD
SAN FRANCISCO, CA
P.O. BOX 884836
SAN FRANCISCO, CA 94188

BUILDING 707
SURVEY UNIT 23



TETRA TECH EC, INC
1230 COLUMBIA STREET, SUITE 750
SAN DIEGO, CA 92101
TEL: (619) 234-8690 FAX: (619) 234-8591



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel E and Building 500 Series Removal Action

Report Date: June 22, 2012

RMAC – CTO 07

Overview

The HPNS Team continued field activities for the Building 517 Site, the Building 707 Triangle, the 500 Series Area, and Work Areas #21 and #36. Details of the activities performed are provided in the sections below.

Building 517 Site

- The HPNS Team provided the RASO with off-site analytical results for the systematic samples collected from Class 1 Survey Unit 2; no activity above the release criteria was identified.

Building 707 Triangle

- The HPNS Team performed Class 1 survey activities for Survey Unit 23. A total of six pothole characterization gamma static measurements were logged with maximum measurements of 223 cpm (FIDLER) and 5,548 cpm. In addition, three soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

500 Series Area

- The HPNS Team performed investigative survey activities for the tennis court area. A total of 10 biased gamma static measurements were logged with a maximum measurement of 6,272 cpm. A total of 1,100 alpha/beta scan readings and 10 alpha/beta static measurements were also logged. The preliminary data does not indicate the presence of alpha/beta activity above the release limit. In addition, 10 swipe samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPNS Team performed Class 1 survey activities for Survey Unit 22. A total of 5 biased and 36 systematic gamma static measurements were logged with a maximum measurement of 7,076 cpm. In addition, 41 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPNS Team provided the RASO with total strontium analytical results for the elevated ^{137}Cs samples collected from Class 1 Survey Units 15 and 19; no further contamination was identified.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- Backfill activities were completed for Trench Unit No. 246 by the HPNS Team.
- The RSOR provided the HPNS Team with survey results for the pipe sections removed from trench segments 07-E36-00-3T, 07-E36-00-3Z, and 07-E36-39-1U and detailed in Survey No. HPS-PEPIPE-061912-053. Because no activity above the release criteria was identified, these 11 pipe sections were released and transferred to the recycling stockpiles.
- The RSOR provided the HPNS Team with survey results for the pipe located in trench segments 07-E36-38-1F, 07-E36-38-8E, and 07-E36-38-8F and detailed in Survey No. HPS-PEPIPE-061912-052. No activity above the release criteria was identified. These pipes will remain in place due to their proximity to Building 606 and the active SFPD sewer and telecommunication lines.
- The RSOR provided the HPNS Team with survey results for the Trench Unit No. 308 concrete pipe bedding debris removed from trench segments 07-E36-00-3T, 07-E36-00-3Z, and 07-E36-39-1U (Survey No. HPS-A-TU308-001). Because no activity above the release criteria was identified, the concrete debris was released and prepared for transfer to the recycling stockpiles.
- Swale installation activities along Hussey Street were continued by the HPNS Team.
- A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: June 29, 2012

RMAC – CTO 07

Overview

The HPNS Team continued field activities for Building 500, the Building 506 and 531 Sites, the Building 707 Triangle, the 500 Series Area, and Work Areas #21 and #36. Details of the activities performed are provided in the sections below.

Building 707 Triangle

- A total of 15 cubic yards were remediated from Class 1 Survey Units 16, 22, and 23 by the HPNS Team and placed in LLRW bins BKRU026000T12 and MHFU001109T18 for off-site disposal.
- The HPNS Team performed additional survey activities around the previously remediated strontium spill area (Class 1 Survey Units 16, 21, 22, and 23). Two previous pothole excavations were remediated and 12 post-remediation gamma static readings logged. The maximum measurements recorded were 216 cpm (FIDLER) and 5,456 cpm. In addition, six soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPNS Team performed Class 1 survey activities in Survey Units 16, 22, and 23. A total of 6 post-remediation gamma static readings logged with the maximum measurements recorded at 203 cpm (FIDLER) and 3,722 cpm. In addition, 3 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

500 Series Area

- The HPNS Team provided the RASO with revised on-site analytical results for the biased and systematic samples collected from Class 1 Survey Unit 22. Characterization and remediation will continue to be performed due to the presence of additional ^{137}Cs contamination as follows:
 - Sample Point 11 (07500SA-S0022-F011-01) with ^{137}Cs at 0.1628 pCi/g
 - Sample Point 38 (07500SA-S0022-F038-01) with ^{137}Cs at 0.1207 pCi/g
- The HPNS Team provided the RASO with revised on-site analytical results for the biased and systematic samples collected from Class 1 Survey Unit 23. Characterization and remediation will continue to be performed due to the presence of additional ^{137}Cs contamination as follows:

- Sample Point 14 (07500SA-S0023-F014-01) with ^{137}Cs at 0.1215 pCi/g
- Sample Point 16 (07500SA-S0023-F016-01) with ^{137}Cs at 0.1338 pCi/g
- Sample Point 35 (07500SA-S0023-F035-01) with ^{137}Cs at 0.1146 pCi/g
- Sample Point 40 (07500SA-S0023-F040-01) with ^{137}Cs at 0.1210 pCi/g
- The HPNS Team provided the RASO with revised on-site analytical results for the biased and systematic samples collected from Class 1 Survey Unit 24. Characterization and remediation will continue to be performed due to the presence of additional ^{137}Cs contamination as follows:
 - Sample Point 7 (07500SA-S0024-F007-01) with ^{137}Cs at 0.1434 pCi/g
 - Sample Point 11 (07500SA-S0024-F011-01) with ^{137}Cs at 0.1412 pCi/g
- The HPNS Team provided the RASO with total strontium analytical results for the elevated ^{137}Cs samples collected from Class 1 Survey Unit 20; no further contamination was identified.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- The HPNS Team provided the RASO with on-site analytical results of the systematic samples collected from Trench Unit No. 308 (associated with the Building 506 and 531 Sites). Because no activity above the release criteria was identified, the systematic samples will be submitted to the off-site laboratory for analysis.
- The HPNS Team issued drawings to identify locations for systematic sample collection in Trench Unit No. 311 (associated with Building 500) and an updated Parcel E Trench Survey Unit Key Plan.
- Swale installation activities along Hussey Street were continued by the HPNS Team.
- A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: July 31, 2012

RMAC – CTO 07

Overview

The HPNS Team continued field activities for the Building 506 Site, the Building 707 Triangle, Shacks 79 and 80, the 500 Series Area, and Work Areas #21 and #36. Details of the activities performed are provided in the sections below.

Building 506 Site

- The HPNS Team completed excavation of the remaining tank pit concrete floor and walls associated with the former underground radiological waste storage tank in Survey Unit 3. The tank pit measures approximately 10 feet in width, 30 feet in length, and 8 feet in depth. A sump pump measuring 1 cubic foot was identified at the base of the structure. Due to the presence of the cracked vault floor, a sample was collected from the soil beneath the concrete surface and submitted to the on-site laboratory for analysis.
- During radiological surface scanning of the removed soil and debris, 170 linear feet of 1.5 inch diameter utility piping, 1 sump filter, 2 metal valves, and 4 cubic yards of soil indicated the presence of elevated gamma readings. The HPNS Team transferred these items to LLRW bin ERRU000159T1 for off-site disposal. In addition, a waste characterization sample was collected and submitted to the on-site laboratory for analysis.
- Perimeter fencing was installed around the exposed tank pit by the HPNS Team.

Building 707 Triangle

- The HPNS Team performed Class 1 survey activities as follows:
 - Survey Unit 22 – A total of 40 systematic gamma static measurements were logged with the maximum measurements recorded at 240 cpm (FIDLER) and 5,563 cpm. In addition, 20 soil samples were collected and submitted to the on-site laboratory for analysis.
 - Survey Unit 23 – A total of 4 biased and 40 systematic gamma static measurements were logged with the maximum measurements recorded at 286 cpm (FIDLER) and 5,730 cpm. In addition, 22 soil samples were collected and submitted to the on-site laboratory for analysis.
- The RSO is in the process of reviewing the survey data for Survey Units 23 and 24

- The HPNS Team provided the RASO with the following:
 - Total strontium analytical results for the 10 additional 12-inch deep pothole excavations around the previously remediated strontium spill area (Class 1 Survey Units 16, 21, 22, and 23); no activity above the release criteria was identified.
 - Total strontium analytical results for the characterization sample collected from Class 1 Survey Unit 23; no activity above the release criteria was identified.
 - Total strontium analytical results for the post-remediation samples collected from Class 1 Survey Unit 22. Characterization and remediation will be performed due to the presence of ^{90}Sr activity above the release criteria at Sample Point 40 (1.29 pCi/g).
 - Isotopic plutonium analytical results for the elevated ^{90}Sr samples collected from Class 1 Survey Units 21 and 22; no further contamination was identified.
 - Off-site analytical results for the systematic samples collected from Class 1 Survey Unit 14; no activity above the release criteria was identified.

Shacks 79 and 80

- The HPNS Team provided the RASO with off-site analytical results for the replacement systematic sample collected from Class 1 Survey Unit 1; no activity above the release criteria was identified.

500 Series Area

- Approximately 3 cubic yards of soil was remediated from Class 1 Survey Unit 15 by the HPNS Team and placed in LLRW bin ERRU000159T1 for off-site disposal.
- The HPNS Team performed Class 1 survey activities for Survey Unit 15. A total of three post-remediation gamma static measurements were logged with a maximum measurement of 6,811 cpm. In addition, three soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- Swale installation activities were continued by the HPNS Team along H and Hussey Streets.
- Approximately 855 tons of asphalt near Building 411 was ground and recycled by Kroeker and the HPNS Team.
- A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report

Area	Survey Unit	Sample Point	Sample Type	Sample ID	Date Collected	COC Radiological Technician
707		196	Pothole	03AB707-196	10-May-12	
707		197	Pothole	03AB707-197	10-May-12	
707		198	Pothole	03AB707-198	10-May-12	
707		199	Pothole	03AB707-199	10-May-12	
707		200	Pothole	03AB707-200	10-May-12	
707		201	Pothole	03AB707-201	10-May-12	
707		202	Pothole	03AB707-202	10-May-12	
707		203	Pothole	03AB707-203	10-May-12	
707		204	Pothole	03AB707-204	10-May-12	
707		205	Pothole	03AB707-205	10-May-12	
707		206	Pothole	03AB707-206	10-May-12	
707		207	Pothole	03AB707-207	10-May-12	
707		208	Pothole	03AB707-208	10-May-12	
707		209	Pothole	03AB707-209	10-May-12	
707		210	Pothole	03AB707-210	10-May-12	
707		211	Pothole	03AB707-211	10-May-12	
707		212	Pothole	03AB707-212	10-May-12	
707		213	Pothole	03AB707-213	10-May-12	
707		214	Pothole	03AB707-214	10-May-12	
707		215	Pothole	03AB707-215	10-May-12	
707		216	Pothole	03AB707-216	10-May-12	
707		217	Pothole	03AB707-217	10-May-12	
707		218	Pothole	03AB707-218	10-May-12	
707		219	Pothole	03AB707-219	13-Jun-12	
707		220	Pothole	03AB707-220	13-Jun-12	
707		221	Pothole	03AB707-221	13-Jun-12	
707		222	Pothole	03AB707-222	13-Jun-12	
707		223	Pothole	03AB707-223	13-Jun-12	
707		224	Pothole	03AB707-224	13-Jun-12	
707		225	Pothole	03AB707-225	29-Jun-12	
707		226	Pothole	03AB707-226	29-Jun-12	
707		227	Pothole	03AB707-227	29-Jun-12	
707		228	Pothole	03AB707-228	29-Jun-12	
707		229	Pothole	03AB707-229	29-Jun-12	
707		230	Pothole	03AB707-230	29-Jun-12	
707		231	Pothole	03AB707-231	16-Jul-12	
707		232	Pothole	03AB707-232	16-Jul-12	
707		233	Pothole	03AB707-233	16-Jul-12	
707		234	Pothole	03AB707-234	16-Jul-12	
707		235	Pothole	03AB707-235	16-Jul-12	
707		236	Pothole	03AB707-236	16-Jul-12	
707		237	Pothole	03AB707-237	16-Jul-12	
707		238	Pothole	03AB707-238	16-Jul-12	
707		239	Pothole	03AB707-239	16-Jul-12	
707		240	Pothole	03AB707-240	16-Jul-12	

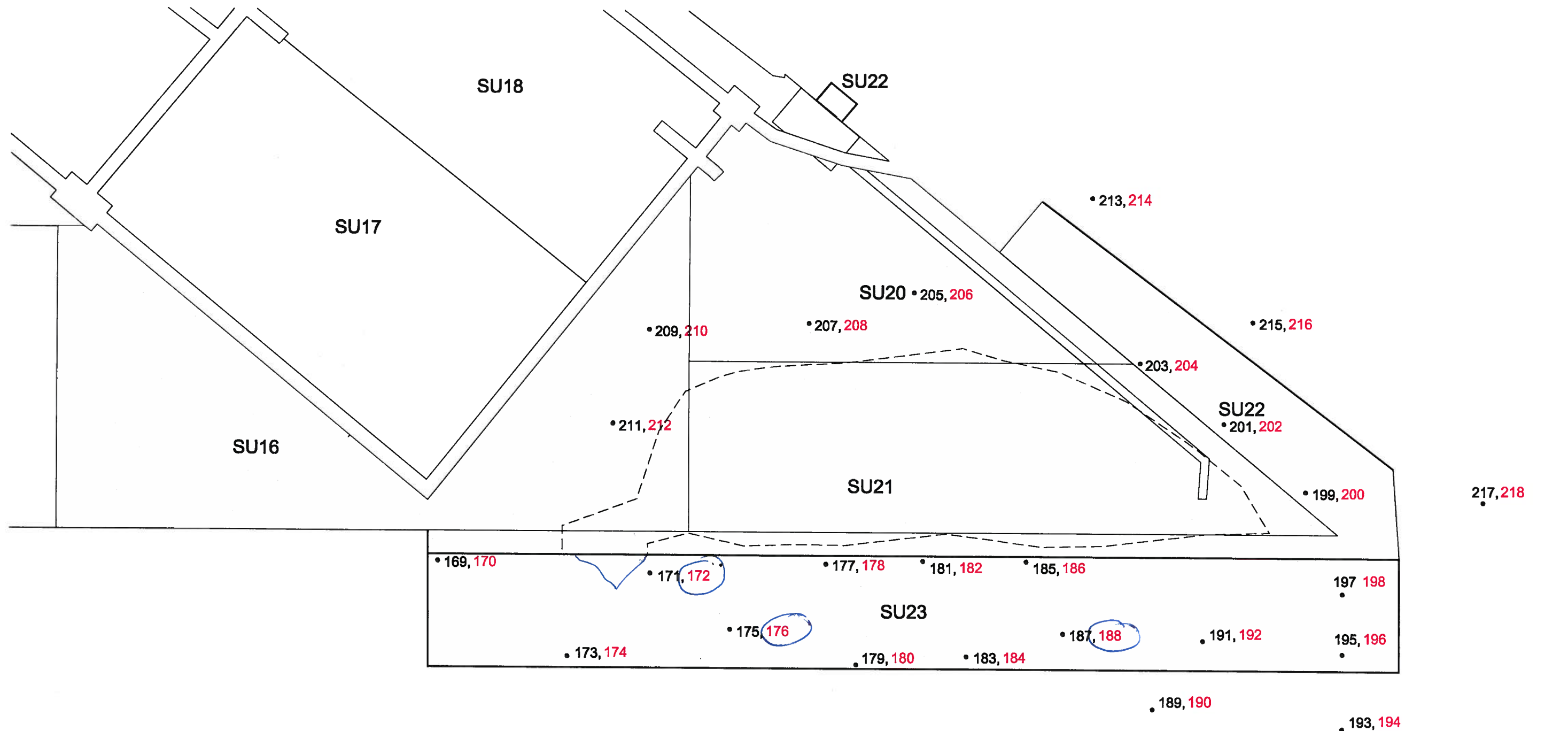
On-Site Laboratory (pCi/g)

K-40	Ra-226	Cs-137	Bi-214	Pb-214
17.11	1.238	-0.01019	0.8515	0.7946
13	0.7313	0.004389	0.229	0.2262
18.08	0.8109	-0.005463	0.3764	0.6288
21.55	0.08181	-0.0001313	0.3286	0.2575
20.07	0.4834	0.2159	0.3433	0.3634
14.84	0.8724	0.01297	0.3167	0.4492
15.5	0.2258	0.0253	0.1285	0.442
12.5	0.5636	0.003668	0.4393	0.3575
13.23	0.7217	-0.0009544	0.4221	0.4995
18.16	0.4581	0	0.514	0.561
19.29	0.5096	0.01719	0.4148	0.5185
10.5	0.6571	0.007032	0.7417	0.631
11.15	0.876	-0.001485	0.522	0.4892
14.08	0.6517	0	0.5036	0.5556
13.66	0.4449	-0.006385	0.3569	0.4927
12.2	0.635	0.007645	0.3254	0.3971
12.97	0.3528	-0.0001886	0.1264	0.3173
13.47	0.7134	0.03336	0.433	0.5992
10.74	0.3129	0.007558	0.512	0.4923
14.01	0.3673	0.03022	0.4466	0.566
15.51	1.155	0.2096	0.4584	0.6364
8.149	0.7831	0.01256	0.3079	0.3968
11.29	0.617	0.00139	0.335	0.4658
21.21	0.1934	0.01769	0.2642	0.157
23.05	0.5164	-0.003408	0.1537	0.2385
26.61	-0.02233	0.004797	0.1063	0.1665
15.27	0.8346	0.1856	0.4146	0.444
12.55	0.7268	0.01898	0.289	0.3934
16.79	0.6025	0.1702	0.4383	0.4545
0.9268	0.338	0	0.1112	0.1672
2.728	0.5169	0.0006006	0.1374	0.1765
0.5585	0	0	0.04905	0.09058
0.7029	0.03241	-0.0002297	0.07772	0.07062
12.54	0.62	0.003265	0.2246	0.4668
9.233	0.4073	-0.007659	0.2151	0.3549
12.45	0.6922	0	0.3813	0.3122
12.07	0.7933	0.01893	0.2593	0.3459
10.08	0.582	0.00003361	0.2593	0.3026
11.89	-0.4507	0.01095	0.4277	0.308
11.92	0.5279	0	0.4028	0.3068
10.5	0.608	0.001672	0.3368	0.3754
11.53	0.7752	0.009789	0.2121	0.2823
10.89	-0.0004168	0.006362	0.299	0.3337
10.43	0.3572	0.01566	0.3765	0.2583
11.72	0.591	-0.0006379	0.375	0.3736

Off-Site Laboratory (pCi/g)

K-40	Ra-226	Cs-137	Bi-214	Pb-214
------	--------	--------	--------	--------

Highlighted Activities: Ra-226 ≥ 1.633 (On-site) & 1.375 (Off-site) ; Cs-137 ≥ 0.113 ; Bi-214 ≥ 1.485 ; Pb-214 ≥ 1.485 (pCi/g)



LEGEND:

BOUNDING SAMPLES 169-218

BOTTOM SAMPLES (169) @ 24" BELOW GROUND SURFACE

SIDEWALL SAMPLES (170) @ 12" BELOW GROUND SURFACE (ON WALL TOWARDS SU21)

----- EXTENT OF REMEDIATION (18" to 24") BELOW GROUND SURFACE

FIELD COPY

BASE REALIGNMENT AND CLOSURE
PROGRAM MANAGEMENT OFFICE WEST
SAN DIEGO, CALIFORNIA

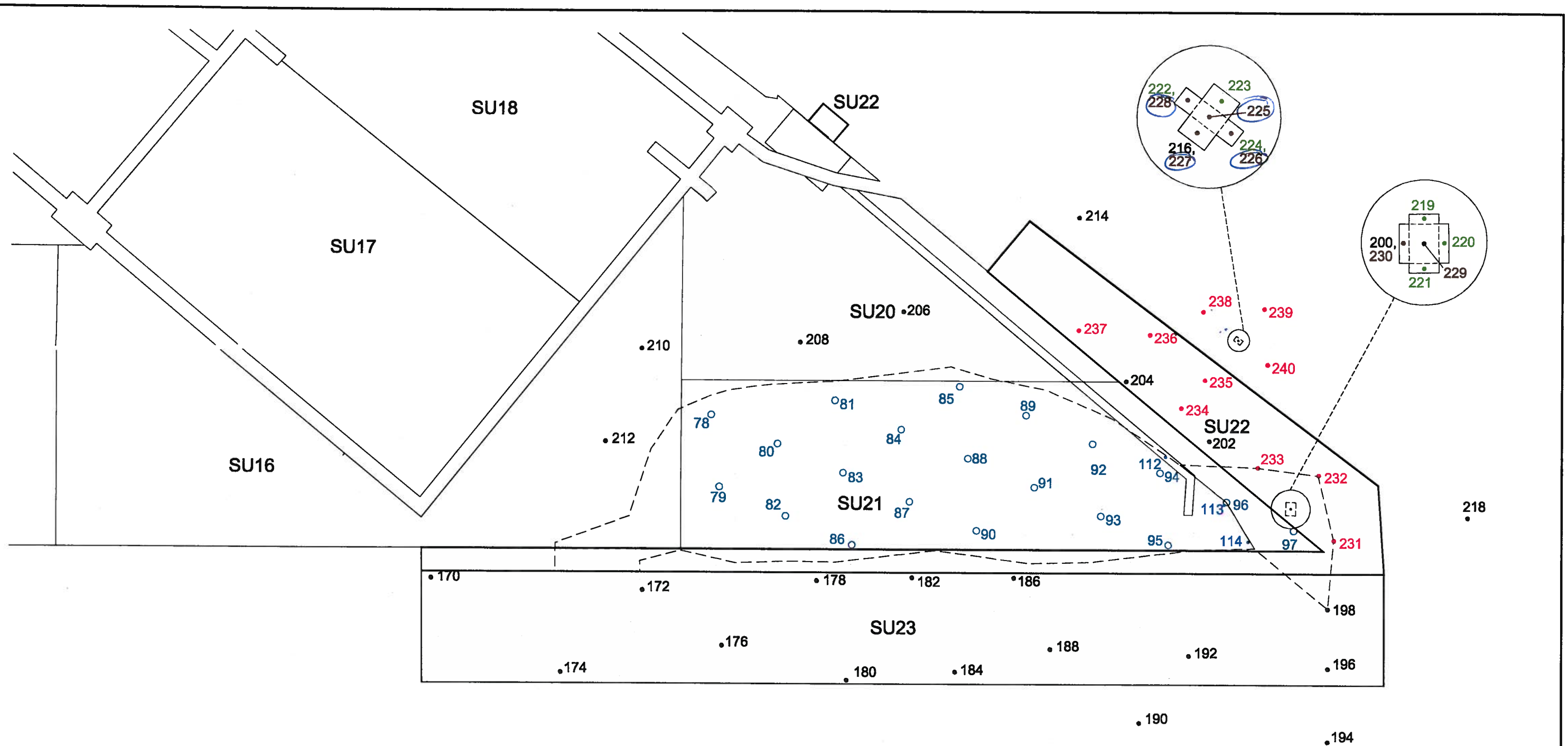
PARCEL E

BUILDING 707 TRIANGLE
BOUNDING SAMPLE LOCATIONS
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CA

REVISION:
AUTHOR: A. CRABTREE
PROJECT NO:
FILE: SEE BELOW

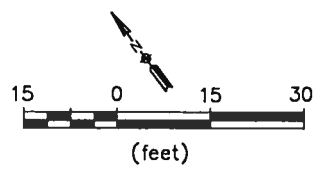


TETRA TECH EC, INC.




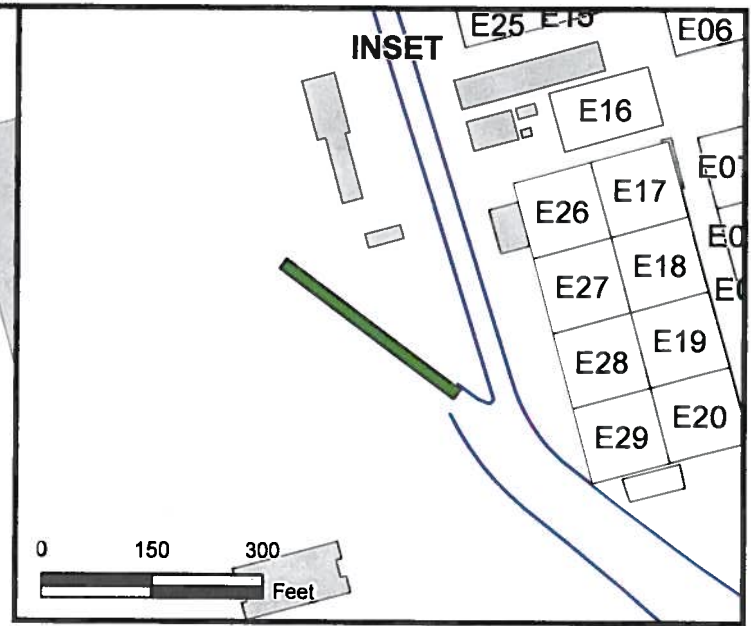
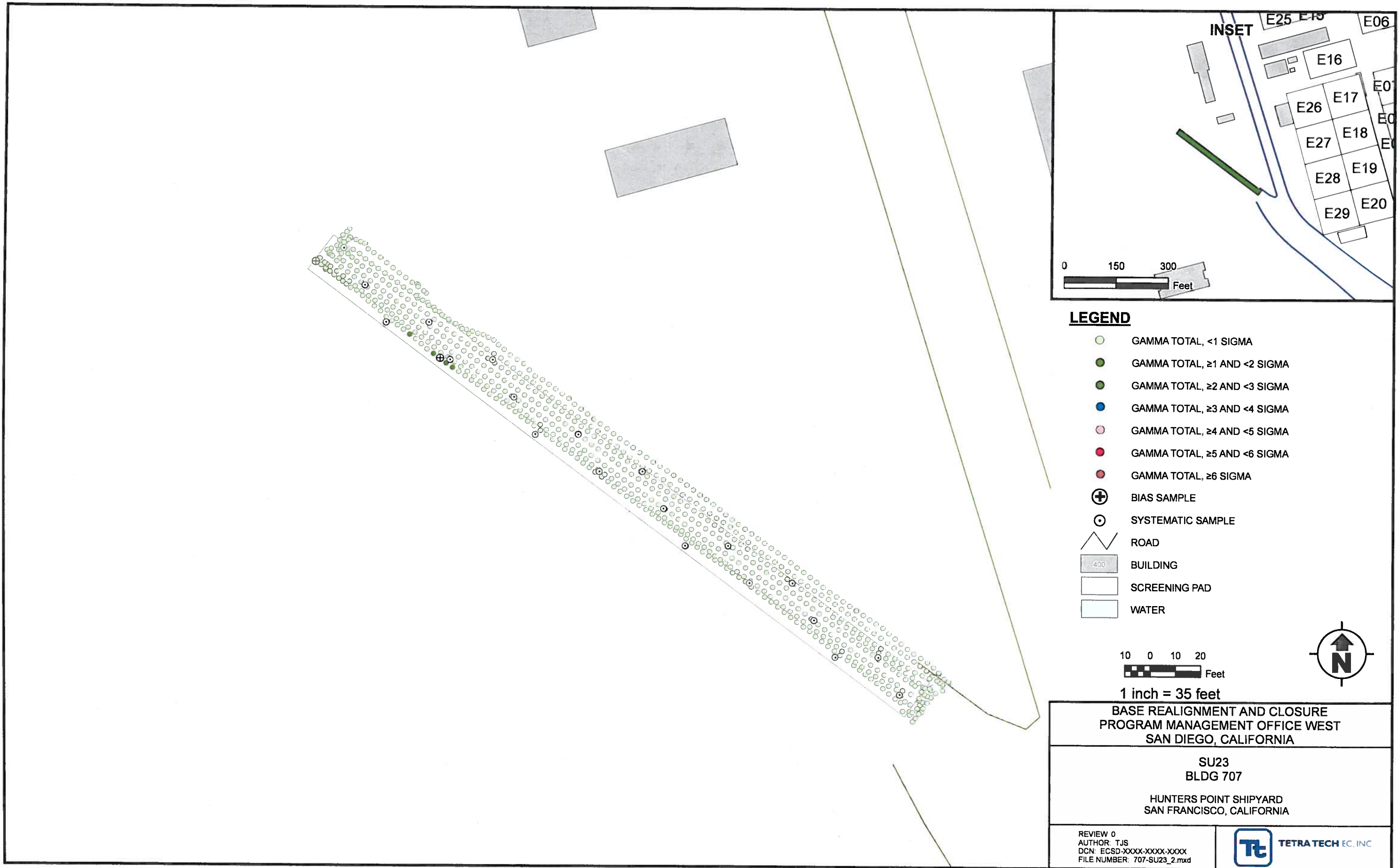
LEGEND:

- SIDEWALL SAMPLES (170) @ 12" BELOW GROUND SURFACE (ON WALL TOWARDS SU21)
- SIDEWALL SAMPLES (219) @ 12" BELOW GROUND SURFACE (ON WALL)
- SU-21 SYSTEMATIC 78-91 @ 12"
- POST-REMEDIATION SAMPLES 225-230
- POST-REMEDIATION SAMPLES 112-114 @ 12"-18"
- POTHOLE BOTTOM SAMPLES @ 12"
- EXTENT OF REMEDITATION (12" to 24") BELOW GROUND SURFACE



RECORD COPY

BASE REALIGNMENT AND CLOSURE PROGRAM MANAGEMENT OFFICE WEST SAN DIEGO, CALIFORNIA	
PARCEL E FORMER BUILDING 707 (SITE) TRIANGLE AREA BOUNDING SAMPLE LOCATIONS	
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CA	
REVISION: AUTHOR: A. CRABTREE PROJECT NO: FILE: SEE BELOW	 TETRA TECH EC, INC.



LEGEND

- GAMMA TOTAL, <1 SIGMA
- GAMMA TOTAL, ≥1 AND <2 SIGMA
- GAMMA TOTAL, ≥2 AND <3 SIGMA
- GAMMA TOTAL, ≥3 AND <4 SIGMA
- GAMMA TOTAL, ≥4 AND <5 SIGMA
- GAMMA TOTAL, ≥5 AND <6 SIGMA
- GAMMA TOTAL, ≥6 SIGMA
- + BIAS SAMPLE
- SYSTEMATIC SAMPLE
- ROAD
- BUILDING
- SCREENING PAD
- WATER

10 0 10 20
Feet

1 inch = 35 feet



BASE REALIGNMENT AND CLOSURE
PROGRAM MANAGEMENT OFFICE WEST
SAN DIEGO, CALIFORNIA

SU23
BLDG 707

HUNTERS POINT SHIPYARD
SAN FRANCISCO, CALIFORNIA

REVIEW 0
AUTHOR: TJS
DCN: ECSD-XXXX-XXXX-XXXX
FILE NUMBER: 707-SU23_2.mxd





TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 517 Survey Unit: 2 Class: 1 Area: 1998.82 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Co60 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
129	4/10/2012 11:38	7296	5886	1410	621-BKGDS1A	7001	
130	4/10/2012 11:40	5375	5886	-511	621-BKGDS1A	7001	
131	4/10/2012 11:41	6449	5886	563	621-BKGDS1A	7001	
132	4/10/2012 11:42	6362	5886	476	621-BKGDS1A	7001	
133	4/10/2012 11:44	5862	5886	-24	621-BKGDS1A	7001	
134	4/10/2012 11:46	4827	5886	-1059	621-BKGDS1A	7001	
135	4/10/2012 12:39	7690	5886	1804	621-BKGDS1A	7001	
136	4/10/2012 12:40	7446	5886	1560	621-BKGDS1A	7001	
137	4/10/2012 12:41	6900	5886	1014	621-BKGDS1A	7001	
138	4/10/2012 12:43	6832	5886	946	621-BKGDS1A	7001	
139	4/10/2012 12:44	6958	5886	1072	621-BKGDS1A	7001	
140	4/10/2012 12:46	6016	5886	130	621-BKGDS1A	7001	
141	4/10/2012 12:47	6468	5886	582	621-BKGDS1A	7001	
142	4/10/2012 12:48	6965	5886	1079	621-BKGDS1A	7001	
143	4/10/2012 12:49	7421	5886	1535	621-BKGDS1A	7001	
144	4/10/2012 12:50	7533	5886	1647	621-BKGDS1A	7001	
145	4/10/2012 12:52	7725	5886	1839	621-BKGDS1A	7001	
146	4/10/2012 12:53	5683	5886	-203	621-BKGDS1A	7001	
147	4/10/2012 12:55	6406	5886	520	621-BKGDS1A	7001	
148	4/10/2012 12:56	6588	5886	702	621-BKGDS1A	7001	
149	4/10/2012 12:57	6603	5886	717	621-BKGDS1A	7001	
150	4/10/2012 12:58	8515	5886	2629	621-BKGDS1A	7001	
151	4/10/2012 13:00	7574	5886	1688	621-BKGDS1A	7001	
152	4/10/2012 13:02	6487	5886	601	621-BKGDS1A	7001	
153	4/10/2012 13:03	6458	5886	572	621-BKGDS1A	7001	
154	4/10/2012 13:04	7741	5886	1855	621-BKGDS1A	7001	
155	4/10/2012 13:05	7805	5886	1919	621-BKGDS1A	7001	
156	4/10/2012 13:07	7779	5886	1893	621-BKGDS1A	7001	
157	4/10/2012 13:08	8176	5886	2290	621-BKGDS1A	7001	
158	4/10/2012 13:24	6787	5886	901	621-BKGDS1A	7001	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 517 Survey Unit: 2 Class: 1 Area: 1998.82 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Co60 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
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Net Gamma cpm Min: -1237

Summary Avg: 1391

Max: 4060

St Dev: 1142

Readings > 3σ investigation level are highlighted in **blue**

* Background ID correlates to instrument reference area background identification number

Gamma measurements > 3σ Investigation level are verified by 2360 beta measurements



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Exposure Rate Measurements

Page 1

Site Area: 517 Survey Unit: 2 Class: 1 Area: 1998.82 m²

Radioisotopes of Concern (ROCs): Cs137 Co60 Ra226 Sr90

Instrument Model:	Model 19	Reference Area Background Identification #:	578-BKGDS1
Instrument Serial Number:	207505	Reference Area Background Location:	Parcel D-1 Reference
Instrument Calibration Due Date:	2/24/2012	Exposure Rate Background (μ R/hr):	5

Rdg #	Date	Exposure Rate (μ R/hr)	Comments
1	12/12/2011	9	
2	12/12/2011	10	
3	12/12/2011	10	
4	12/12/2011	9	
5	12/12/2011	8	
6	12/12/2011	9	
7	12/12/2011	9	
8	12/12/2011	7	
9	12/12/2011	8	
10	12/12/2011	8	
11	12/12/2011	7	
12	12/12/2011	7	
13	12/12/2011	7	
14	12/12/2011	8	
15	12/12/2011	8	
16	12/12/2011	8	
17	12/12/2011	7	
18	12/12/2011	8	
19	12/12/2011	9	
20	12/12/2011	7	
21	12/12/2011	6	
22	12/12/2011	7	
23	12/12/2011	7	
24	12/12/2011	8	
25	12/12/2011	8	
26	12/12/2011	7	
27	12/12/2011	7	



Rdg #	Date	Exposure Rate (μ R/hr)	Comments
28	12/12/2011	8	
29	12/12/2011	8	
30	12/12/2011	8	
31	12/12/2011	8	
32	12/12/2011	7	
33	12/12/2011	7	
34	12/12/2011	9	
35	12/12/2011	9	
36	12/12/2011	8	
37	12/12/2011	8	
38	12/12/2011	6	
39	12/12/2011	9	
40	12/12/2011	9	
41	12/12/2011	9	
42	12/12/2011	8	
43	12/12/2011	7	
44	1/12/2012	7	
45	1/12/2012	7	
46	1/12/2012	7	
47	1/12/2012	8	
48	1/12/2012	8	
49	1/12/2012	8	
50	1/12/2012	8	
51	1/12/2012	8	
52	1/12/2012	8	
53	1/12/2012	8	
54	1/12/2012	10	
55	1/12/2012	10	
56	1/12/2012	9	
57	1/12/2012	9	
58	1/12/2012	9	
59	1/12/2012	10	
60	1/12/2012	10	
61	1/12/2012	10	
62	1/12/2012	9	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: 517 Survey Unit: 2 Class: 1 Area: 1998.82 m²

Radioisotopes of Concern (ROCs): Cs137 Co60 Ra226 Sr90

2350 Identification #: 621

Instrument/Probe Type: 2350-1 / 44-10

Instrument Serial #: 98613

Probe Serial #: 192584

Calibration Due Date: 10/2/2012

Reference Area Background Identification #: 621-BKGDS1A Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	10/28/2011 13:11	6579
2	10/28/2011 13:12	5806
3	10/28/2011 13:13	5810
4	10/28/2011 13:15	5708
5	10/28/2011 13:16	5928
6	10/28/2011 13:17	6468
7	10/28/2011 13:19	6385
8	10/28/2011 13:20	6664
9	10/28/2011 13:21	5974
10	10/28/2011 13:22	5682
11	10/28/2011 13:23	5896
12	10/28/2011 13:24	5890
13	10/28/2011 13:25	5313
14	10/28/2011 13:27	5811
15	10/28/2011 13:28	5835
16	10/28/2011 13:29	5626
17	10/28/2011 13:30	5476
18	10/28/2011 13:31	5758
19	10/28/2011 13:32	5698
20	10/28/2011 13:33	5403

Gamma Mean Background (cpm): 5886

Standard Deviation: 372

Gamma 3 σ Investigation
Level (cpm): 7001



TETRATECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: 517 Survey Unit: 2 Class: 1 Area: 1998.82 m²

Radioisotopes of Concern (ROCs): Cs137 Co60 Ra226 Sr90

2350 Identification #: 622

Instrument/Probe Type: 2350-1 / 44-10

Instrument Serial #: 129430

Probe Serial #: 230163

Calibration Due Date: 10/2/2012

Reference Area Background Identification #: 622-BKGDS1A Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	10/13/2011 15:12	5811
2	10/13/2011 15:13	5788
3	10/13/2011 15:14	5839
4	10/13/2011 15:15	5848
5	10/13/2011 15:16	5775
6	10/13/2011 15:17	5780
7	10/13/2011 15:18	5977
8	10/13/2011 15:20	5831
9	10/13/2011 15:21	5998
10	10/13/2011 15:22	5240
11	10/13/2011 15:23	5892
12	10/13/2011 15:24	5899
13	10/13/2011 15:25	5001
14	10/13/2011 15:27	5852
15	10/13/2011 15:28	5894
16	10/13/2011 15:29	5075
17	10/13/2011 15:31	6115
18	10/13/2011 15:32	6400
19	10/13/2011 15:33	6490
20	10/13/2011 15:35	6396

Gamma Mean Background (cpm): 5845

Standard Deviation: 386

Gamma 3 σ Investigation
Level (cpm): 7004



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Exposure Rate Measurements

Page 4

Site Area: 517 Survey Unit: 2 Class: 1 Area: 1998.82 m²

Radioisotopes of Concern (ROCs): Cs137 Co60 Ra226 Sr90

Instrument Model:	Model 19	Reference Area Background Identification #:	577-BKGDS1
Instrument Serial Number:	109970	Reference Area Background Location:	Parcel D-1 Reference
Instrument Calibration Due Date:	2/24/2012	Exposure Rate Background (μ R/hr):	5

Rdg #	Date	Exposure Rate (μ R/hr)	Comments
63	1/19/2012	10	
64	1/19/2012	10	
65	1/19/2012	10	
66	1/19/2012	9	
67	1/19/2012	7	
68	1/19/2012	8	
69	1/19/2012	7	
70	1/19/2012	7	
71	2/2/2012	9	
72	2/2/2012	8	
73	2/2/2012	8	
74	2/2/2012	8	
75	2/2/2012	8	
76	2/2/2012	8	
77	2/2/2012	8	
78	2/2/2012	8	
79	2/2/2012	7	
80	2/2/2012	8	
81	2/2/2012	9	
82	2/2/2012	10	
83	2/2/2012	9	
84	2/2/2012	9	
85	2/2/2012	9	
86	2/2/2012	8	
87	2/2/2012	7	
88	2/2/2012	10	
89	2/2/2012	9	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Exposure Rate Measurements

Page 3

Exposure Rate	Min: 6.00
Summary ($\mu\text{R/hr}$)	Avg: 8.13
	Max: 10.00
	St Dev: 1.03



Rdg #	Date	Exposure Rate (μ R/hr)	Comments
90	2/2/2012	8	
91	2/2/2012	8	
92	2/2/2012	8	
93	2/2/2012	7	
94	2/2/2012	7	
95	2/2/2012	10	
96	2/2/2012	9	
97	2/2/2012	9	
98	2/2/2012	9	
99	2/2/2012	7	
100	2/2/2012	7	
101	2/2/2012	8	
102	2/2/2012	9	
103	2/2/2012	7	
104	2/2/2012	7	
105	2/2/2012	8	
106	2/2/2012	7	
107	2/2/2012	6	

Exposure Rate **Min: 6.00**
Summary (μ R/hr) **Avg: 8.20**
 Max: 10.00
 St Dev: 1.06



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Exposure Rate Measurements

Page 6

Site Area: 517 Survey Unit: 2 Class: 1 Area: 1998.82 m²

Radioisotopes of Concern (ROCs): Cs137 Co60 Ra226 Sr90

Instrument Model:	Model 19	Reference Area Background Identification #:	666-BKGDS1
Instrument Serial Number:	91499	Reference Area Background Location:	Parcel D-1 Reference
Instrument Calibration Due Date:	1/15/2013	Exposure Rate Background (μR/hr):	6

Rdg #	Date	Exposure Rate (μR/hr)	Comments
108	2/21/2012	9	
109	2/21/2012	9	
110	2/21/2012	9	
111	2/21/2012	9	
112	2/21/2012	9	
113	2/21/2012	10	
114	2/21/2012	10	
115	3/5/2012	8	
116	3/5/2012	8	
117	3/5/2012	8	
118	3/5/2012	8	
119	4/2/2012	7	
120	4/2/2012	7	
121	4/2/2012	7	
122	4/2/2012	7	
123	4/10/2012	8	
124	4/10/2012	8	
125	4/10/2012	7	
126	4/10/2012	7	
127	4/10/2012	8	
128	4/10/2012	7	
129	4/10/2012	8	
130	4/10/2012	8	
131	4/10/2012	7	
132	4/10/2012	7	
133	4/10/2012	7	
134	4/10/2012	8	



Rdg #	Date	Exposure Rate (μ R/hr)	Comments
135	4/10/2012	8	
136	4/10/2012	9	
137	4/10/2012	9	
138	4/10/2012	8	
139	4/10/2012	8	
140	4/10/2012	8	
141	4/10/2012	7	
142	4/10/2012	8	
143	4/10/2012	8	
144	4/10/2012	9	
145	4/10/2012	9	
146	4/10/2012	9	
147	4/10/2012	7	
148	4/10/2012	8	
149	4/10/2012	8	
150	4/10/2012	8	
151	4/10/2012	9	
152	4/10/2012	9	
153	4/10/2012	7	
154	4/10/2012	9	
155	4/10/2012	9	
156	4/10/2012	9	
157	4/10/2012	9	
158	4/10/2012	9	

Exposure Rate Min: 7.00
Summary (μ R/hr) Avg: 8.16
 Max: 10.00
 St Dev: 0.86



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02155

Project Name Radiological Building Survey	PO Number N/A	LABORATORY NAME ONSITE - Curtis & Tompkins, Ltd.		Project Information Section								
Project Location HUNTERS POINT	Project Number 4044-0007	LABORATORY ID										
Sampler Name J. ROLFE	Airbill Number N/A											
Project Chemist LISA BIENKOWSKI	Project Chemist Phone 949-756-7592											
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	G A M M A S P E C	S R 9 0 A	A L P H A	COMMENTS	LOCATION	SAMPLE ID
07517-S0002-F001-01	12/12/2011	0750	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
07517-S0002-F002-01	12/12/2011	0755	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
07517-S0002-F003-01	12/12/2011	0800	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
07517-S0002-F004-01	12/12/2011	0805	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
07517-S0002-F005-01	12/12/2011	0810	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
07517-S0002-F006-01	12/12/2011	0815	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
07517-S0002-F007-01	12/12/2011	0820	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
07517-S0002-F008-01	12/12/2011	0825	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
07517-S0002-F009-01	12/12/2011	0830	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
07517-S0002-F010-01	12/12/2011	0835	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
07517-S0002-F011-01	12/12/2011	0840	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
07517-S0002-F012-01	12/12/2011	0845	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			

Relinquished by: (signature) J. Rolfe	Date 12.12.11	Received by: (signature) C. ET	LABORATORY INSTRUCTIONS/COMMENTS	SAMPLING COMMENTS Bldg 517 SITE SU-2. BIASED 1-7 SYSTEMATIC 8-43
Company R S R S	Time 14:35	Company C ET	COMPOSITE DESCRIPTION	
Relinquished by: (signature)	Date	Received by: (signature)	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY) TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:	
Company	Time	Company		
Relinquished by: (signature)	Date	Received by: (signature)		
Company	Time	Company		



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02156

Project Name Radiological Building Survey		PO Number N/A		LABORATORY NAME ONSITE - Curtis & Tompkins, Ltd.		Project Information Section			
Project Location HUNTERS POINT		Project Number 4044-0007		LABORATORY ID					
Sampler Name J. ROLFE		Airbill Number N/A							
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592							
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	COMMENTS	LOCATION	SAMPLE_ID
07517-S0002-F013-01	12/12/2011	0850	1		S				
07517-S0002-F014-01	12/12/2011	0930	1		S				
07517-S0002-F015-01	12/12/2011	0935	1		S				
07517-S0002-F016-01	12/12/2011	0940	1		S				
07517-S0002-F017-01	12/12/2011	0945	1		S				
07517-S0002-F018-01	12/12/2011	0950	1		S				
07517-S0002-F019-01	12/12/2011	0955	1		S				
07517-S0002-F020-01	12/12/2011	1000	1		S		DUP		
07517-S0002-F021-01	12/12/2011	1005	1		S				
07517-S0002-F022-01	12/12/2011	1010	1		S				
07517-S0002-F023-01	12/12/2011	1015	1		S				
07517-S0002-F024-01	12/12/2011	1020	1		S				

Relinquished by: (signature) [Signature]		Date 12.12.11	Received by: (signature) [Signature]	
Company R S R S		Time 14:35	Company C E I	
Relinquished by: (signature)		Date	Received by: (signature)	
Company		Time	Company	
Relinquished by: (signature)		Date	Received by: (signature)	
Company		Time	Company	

LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS	
COMPOSITE DESCRIPTION		SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY) TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:	



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02157

Project Name Radiological Building Survey	PO Number N/A	LABORATORY NAME ONSITE - Curtis & Tompkins, Ltd.		Project Information Section							
Project Location HUNTERS POINT	Project Number 4044-0007	LABORATORY ID									
Sampler Name J. ROLFE	Airbill Number N/A										
Project Chemist LISA BIENKOWSKI	Project Chemist Phone 949-756-7592										
SAMPLE ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	G A M M A S P E C	A L P H A	COMMENTS	LOCATION	SAMPLE ID
07517-S0002-F025-01	12/12/2011	1025	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>			
07517-S0002-F026-01	12/12/2011	1030	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>			
07517-S0002-F027-01	12/12/2011	1035	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>			
07517-S0002-F028-01	12/12/2011	1040	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>			
07517-S0002-F029-01	12/12/2011	1045	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>			
07517-S0002-F030-01	12/12/2011	1050	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>			
07517-S0002-F031-01	12/12/2011	1055	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>			
07517-S0002-F032-01	12/12/2011	1100	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>			
07517-S0002-F033-01	12/12/2011	1105	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>			
07517-S0002-F034-01	12/12/2011	1110	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>			
07517-S0002-F035-01	12/12/2011	1115	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>			
07517-S0002-F036-01	12/12/2011	1120	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>			

Relinquished by: (signature) J. Rolfe	Date 12-12-11	Received by: (signature) CET	LABORATORY INSTRUCTIONS/COMMENTS	SAMPLING COMMENTS
Company RSRS	Time 14:35	Company CET	COMPOSITE DESCRIPTION	
Relinquished by: (signature)	Date	Received by: (signature)	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)	
Company	Time	Company	TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:	
Relinquished by: (signature)	Date	Received by: (signature)		
Company	Time	Company		



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02158

Project Name Radiological Building Survey		PO Number N/A		LABORATORY NAME ONSITE - Curtis & Tompkins, Ltd.		Project Information Section			
Project Location HUNTERS POINT		Project Number 4044-0007		LABORATORY ID					
Sampler Name J. ROLFE		Airbill Number N/A							
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592							
SAMPLE ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	COMMENTS	LOCATION	SAMPLE ID
07517-S0002-F037-01	12/12/2011	1125	1		S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
07517-S0002-F038-01	12/12/2011	1130	1		S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
07517-S0002-F039-01	12/12/2011	1135	1		S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
07517-S0002-F040-01	12/12/2011	1140	1		S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
07517-S0002-F041-01	12/12/2011	1245	1		S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
07517-S0002-F042-01	12/12/2011	1250	1		S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
07517-S0002-F043-01	12/12/2011	1255	1		S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		

Relinquished by: (signature) J. Rolfe	Date 12/12/11	Received by: (signature) C. T.	LABORATORY INSTRUCTIONS/COMMENTS	SAMPLING COMMENTS
Company RSRS	Time 14:35	Company CIT	COMPOSITE DESCRIPTION	
Relinquished by: (signature)	Date	Received by: (signature)		
Company	Time	Company	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY) TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:	
Relinquished by: (signature)	Date	Received by: (signature)		
Company	Time	Company		



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02183

Project Name Radiological Building Survey	PO Number N/A	G A M M A S P E C		S R 9 0 A S P E C		A L P H A		LABORATORY NAME ON SITE - Curtis & Tompkins, Ltd. LABORATORY ID	Project Information Section	
Project Location HUNTERS POINT	Project Number 4044-0007									
Sampler Name J. Rolfe	Airbill Number N/A									
Project Chemist LISA BIENKOWSKI	Project Chemist Phone 949-756-7592									
SAMPLE ID	DATE	TIME	Containers	LEVEL	TYPE	T A P	I I I	COMMENTS	LOCATION	SAMPLE ID
07517-S0002-F044-01	1/12/2012	0815	1		S		<input checked="" type="checkbox"/>			
07517-S0002-F045-01	1/12/2012	0820	1		S		<input checked="" type="checkbox"/>			
07517-S0002-F046-01	1/12/2012	0825	1		S		<input checked="" type="checkbox"/>			
07517-S0002-F047-01	1/12/2012	0830	1		S		<input checked="" type="checkbox"/>			
07517-S0002-F048-01	1/12/2012	0835	1		S		<input checked="" type="checkbox"/>			
07517-S0002-F049-01	1/12/2012	0840	1		S		<input checked="" type="checkbox"/>			
07517-S0002-F050-01	1/12/2012	0845	1		S		<input checked="" type="checkbox"/>			
07517-S0002-F051-01	1/12/2012	0850	1		S		<input checked="" type="checkbox"/>			
07517-S0002-F052-01	1/12/2012	0855	1		S		<input checked="" type="checkbox"/>			
07517-S0002-F053-01	1/12/2012	0925	1		S		<input checked="" type="checkbox"/>			
07517-S0002-F054-01	1/12/2012	0930	1		S		<input checked="" type="checkbox"/>			
07517-S0002-F055-01	1/12/2012	0935	1		S		<input checked="" type="checkbox"/>			

Relinquished by: (signature) J. Rolfe	Date 1-12-12	Received by: (signature) C. G. T.	LABORATORY INSTRUCTIONS/COMMENTS
Company R S R S	Time 1501	Company C G T	SAMPLING COMMENTS BS17 SITE AREA SU-2 CHARACTERIZATION 44-62
Relinquished by: (signature)	Date	Received by: (signature)	
Company	Time	Company	
Relinquished by: (signature)	Date	Received by: (signature)	
Company	Time	Company	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY) TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02184

Project Name Radiological Building Survey		PO Number N/A		LABORATORY NAME ONSITE - Curfiss & Tompkins, Ltd.		Project Information Section	
Project Location HUNTERS POINT		Project Number 4044-0007		LABORATORY ID			
Sampler Name J. Rolfe		Airbill Number N/A					
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592					
SAMPLE ID	DATE	TIME	Containers	LEVEL	TYPE	1	1
07517-S0002-F056-01	1/12/2012	0940	1		S	<input checked="" type="checkbox"/>	<input type="checkbox"/>
07517-S0002-F057-01	1/12/2012	0945	1		S	<input checked="" type="checkbox"/>	<input type="checkbox"/>
07517-S0002-F058-01	1/12/2012	0950	1		S	<input checked="" type="checkbox"/>	<input type="checkbox"/>
07517-S0002-F059-01	1/12/2012	0955	1		S	<input checked="" type="checkbox"/>	<input type="checkbox"/>
07517-S0002-F060-01	1/12/2012	1000	1		S	<input checked="" type="checkbox"/>	<input type="checkbox"/>
07517-S0002-F061-01	1/12/2012	1005	1		S	<input checked="" type="checkbox"/>	<input type="checkbox"/>
07517-S0002-F062-01	1/12/2012	1010	1		S	<input checked="" type="checkbox"/>	<input type="checkbox"/>
COMMENTS						LOCATION	SAMPLE ID

Relinquished by: (signature)		Date	1-12-12	Received by: (signature)		LABORATORY INSTRUCTIONS/COMMENTS	
Company	RSRS	Time	1501	Company		COMPOSITE DESCRIPTION	
Relinquished by: (signature)		Date		Received by: (signature)		SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)	
Company		Time		Company		TEMPERATURE SAMPLE CONDITION COOLER SEAL	
Relinquished by: (signature)		Date		Received by: (signature)			
Company		Time		Company			



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02204

Project Name Radiological Building Survey		PO Number N/A		LABORATORY NAME ONSITE - Curtis & Tompkins, Ltd.		Project Information Section	
Project Location HUNTERS POINT		Project Number 4044-0007		LABORATORY ID			
Sample Name <i>R. Chongsky</i>		Airbill Number N/A					
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592					
SAMPLE ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	COMMENTS
07517-S0002-F063-01	1/19/2012	1420	1		S	<input checked="" type="checkbox"/>	
07517-S0002-F064-01	1/19/2012	1405	1		S	<input checked="" type="checkbox"/>	
07517-S0002-F065-01	1/19/2012	1410	1		S	<input checked="" type="checkbox"/>	
07517-S0002-F066-01	1/19/2012	1415	1		S	<input checked="" type="checkbox"/>	
07517-S0002-F067-01	1/19/2012	1420	1		S	<input checked="" type="checkbox"/>	
07517-S0002-F068-01	1/19/2012	1425	1		S	<input checked="" type="checkbox"/>	
07517-S0002-F069-01	1/19/2012	1430	1		S	<input checked="" type="checkbox"/>	
07517-S0002-F070-01	1/19/2012	1435	1		S	<input checked="" type="checkbox"/>	

Relinquished by: (signature) <i>R. Chongsky</i>	Date 1-19-12	Received by: (signature) <i>[Signature]</i>	LABORATORY INSTRUCTIONS/COMMENTS
Company BRLS	Time 1520	Company CET	SAMPLING COMMENTS Bldg 517 SITE SU-2 Post Remediation 63-70
Relinquished by: (signature)	Date	Received by: (signature)	
Company	Time	Company	
Relinquished by: (signature)	Date	Received by: (signature)	
Company	Time	Company	COMPOSITE DESCRIPTION
Relinquished by: (signature)	Date	Received by: (signature)	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY) TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:
Company	Time	Company	

Chain-of-Custody Record

BFS 02242

Project Name Radiological Building Survey		PO Number N/A		G A M A S P E C		S R P H A		Project Information Section	
Project Location HUNTERS POINT		Project Number 4044-0007		M M A S P E C		O N S I T E - R S R S		LABORATORY NAME	
Sampler Name J. Rolfe		Airbill Number N/A		A S P E C		L A B O R A T O R Y I D		LABORATORY ID	
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592		P R O J E C T		C O M M E N T S		LOCATION	
SAMPLE ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	1	1	SAMPLE ID
07517-S0002-F071-01	2/2/2012	0840	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>	
07517-S0002-F072-01	2/2/2012	0845	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>	
07517-S0002-F073-01	2/2/2012	0850	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>	
07517-S0002-F074-01	2/2/2012	0855	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>	
07517-S0002-F075-01	2/2/2012	0930	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>	
07517-S0002-F076-01	2/2/2012	0935	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>	
07517-S0002-F077-01	2/2/2012	0940	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>	
07517-S0002-F078-01	2/2/2012	0945	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>	
07517-S0002-F079-01	2/2/2012	0950	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>	
07517-S0002-F080-01	2/2/2012	0955	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>	
07517-S0002-F081-01	2/2/2012	1000	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>	
07517-S0002-F082-01	2/2/2012	1005	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Relinquished by (signature) J. Rolfe		Date 2-2-12		Received by (signature) [Signature]	
Company RSRS		Time 1:435		Company [Signature]	
Relinquished by (signature)		Date		Received by (signature)	
Company		Time		Company	
Relinquished by (signature)		Date		Received by (signature)	
Company		Time		Company	

LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS	
COMPOSITE DESCRIPTION		BFS 517 SITE	
SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)		SU-2	
TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:		BASED 71	
		SYSTEMATIC 72-107	



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02243

Project Name Radiological Building Survey		PO Number N/A		G S A L M 9 P H M 0 A		LABORATORY NAME ONSITE - RSRs		Project Information Section	
Project Location HUNTERS POINT		Project Number 4044-0007		A S P E C		LABORATORY ID			
Sampler Name J. Rolfe		Airbill Number N/A							
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592							
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	COMMENTS	LOCATION	SAMPLE ID
07517-S0002-F083-01	2/2/2012	1010	1		S	<input checked="" type="checkbox"/>			
07517-S0002-F084-01	2/2/2012	1015	1		S	<input checked="" type="checkbox"/>			
07517-S0002-F085-01	2/2/2012	1020	1		S	<input checked="" type="checkbox"/>			
07517-S0002-F086-01	2/2/2012	1025	1		S	<input checked="" type="checkbox"/>			
07517-S0002-F087-01	2/2/2012	1030	1		S	<input checked="" type="checkbox"/>			
07517-S0002-F088-01	2/2/2012	1035	1		S	<input checked="" type="checkbox"/>			
07517-S0002-F089-01	2/2/2012	1040	1		S	<input checked="" type="checkbox"/>			
07517-S0002-F090-01	2/2/2012	1045	1		S	<input checked="" type="checkbox"/>			
07517-S0002-F091-01	2/2/2012	1050	1		S	<input checked="" type="checkbox"/>			
07517-S0002-F092-01	2/2/2012	1055	1		S	<input checked="" type="checkbox"/>			
07517-S0002-F093-01	2/2/2012	1100	1		S	<input checked="" type="checkbox"/>			
07517-S0002-F094-01	2/2/2012	1105	1		S	<input checked="" type="checkbox"/>			

Relinquished by: (signature) J. Rolfe		Date 2-2-12		Received by: (signature) [Signature]	
Company RSRS		Time 1435		Company [Signature]	
Relinquished by: (signature)		Date		Received by: (signature)	
Company		Time		Company	
Relinquished by: (signature)		Date		Received by: (signature)	
Company		Time		Company	

LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS	
COMPOSITE/DESCRIPTION			
SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY) TEMPERATURE SAMPLE CONDITION COOLER SEAL			



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02244

Project Name Radiological Building Survey		PO Number N/A		G A S A L P H A M 9 0 A S P E C		LABORATORY NAME ONSITE - RSRs		Project Information Section	
Project Location HUNTERS POINT		Project Number 4044-0007				LABORATORY ID			
Sampler Name J. Rolfe		Airbill Number N/A							
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592							
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T A	COMMENTS	LOCATION	SAMPLE ID
07517-S0002-F095-01	2/2/2012	1110	1		S	<input checked="" type="checkbox"/>			
07517-S0002-F096-01	2/2/2012	1115	1		S	<input checked="" type="checkbox"/>			
07517-S0002-F097-01	2/2/2012	1120	1		S	<input checked="" type="checkbox"/>			
07517-S0002-F098-01	2/2/2012	1125	1		S	<input checked="" type="checkbox"/>			
07517-S0002-F099-01	2/2/2012	1130	1		S	<input checked="" type="checkbox"/>			
07517-S0002-F100-01	2/2/2012	1135	1		S	<input checked="" type="checkbox"/>			
07517-S0002-F101-01	2/2/2012	1140	1		S	<input checked="" type="checkbox"/>			
07517-S0002-F102-01	2/2/2012	1145	1		S	<input checked="" type="checkbox"/>			
07517-S0002-F103-01	2/2/2012	1150	1		S	<input checked="" type="checkbox"/>			
07517-S0002-F104-01	2/2/2012	1155	1		S	<input checked="" type="checkbox"/>			
07517-S0002-F105-01	2/2/2012	1235	1		S	<input checked="" type="checkbox"/>			
07517-S0002-F108-01	2/2/2012	1240	1		S	<input checked="" type="checkbox"/>			

Relinquished by: (signature) Company RSRs		Date 2-2-12	Received by: (signature) Company CBT	
Relinquished by: (signature)		Date 1/4/35	Received by: (signature)	
Company		Time	Company	
Relinquished by: (signature)		Date	Received by: (signature)	
Company		Time	Company	

LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS	
COMPOSITE DESCRIPTION			
SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)		COOLERS	
TEMPERATURE		SAMPLE CONDITION	



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02245

Page 1 of 1

Project Name Radiological Building Survey		PO Number N/A		G A L P H A		S R 0 A		Project Information Section	
Project Location HUNTERS POINT		Project Number 4044-0007		M M A S P E C		LABORATORY NAME ONSITE - RSRs		LABORATORY ID	
Sampler Name J. Rolfe		Airbill Number N/A		Project Chemist Phone 949-756-7592		COMMENTS		LOCATION	
Project Chemist LISA BIENKOWSKI		DATE 2/2/2012		TIME 1245		CONTAINERS 1		LEVEL S	
SAMPLE_ID 07517-S0002-F107-01		DATE 2/2/2012		TIME 1245		CONTAINERS 1		LEVEL S	
SAMPLE_ID		DATE		TIME		CONTAINERS		LEVEL	
07517-S0002-F107-01		2/2/2012		1245		1		S	
SAMPLE_ID		DATE		TIME		CONTAINERS		LEVEL	
07517-S0002-F107-01		2/2/2012		1245		1		S	

Relinquished by: (signature)		Date		Received by: (signature)		LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS	
Company RSRs		2.2.12		Company CF		COMPOSITE DESCRIPTION			
Relinquished by: (signature)		Date		Received by: (signature)		SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)			
Company		Time		Company		TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:			
Relinquished by: (signature)		Date		Received by: (signature)					
Company		Time		Company					



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02276

Project Name Radiological Building Survey		PO Number N/A		G A M A S P E C		S A L P H A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD. LABORATORY ID		Project Information Section		
Project Location HUNTERS POINT		Project Number 4044-0007										
Sampler Name <i>Lisa Bienkowski</i>		Airbill Number N/A										
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592										
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	I	I	I	COMMENTS	LOCATION	SAMPLE ID
07517-S0002-F108-01	2/21/2012	1330	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
07517-S0002-F109-01	2/21/2012	1335	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
07517-S0002-F110-01	2/21/2012	1340	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
07517-S0002-F111-01	2/21/2012	1345	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
07517-S0002-F112-01	2/21/2012	1350	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
07517-S0002-F113-01	2/21/2012	1355	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
07517-S0002-F114-01	2/21/2012	1430	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			

Relinquished by: (signature) <i>[Signature]</i>		Date 02-21-12		Received by: (signature) <i>[Signature]</i>		SAMPLING COMMENTS BUDG SITE SO-2 CHARACTERIZATION 108-114	
Company R5RS		Time 1528		Company CF			
Relinquished by: (signature)		Date		Received by: (signature)		LABORATORY INSTRUCTIONS/COMMENTS	
Company		Time		Company		COMPOSITE DESCRIPTION	
Relinquished by: (signature)		Date		Received by: (signature)		SAMPLING CONDITION UPON RECEIPT (FOR LABORATORY)	
Company		Time		Company		TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:	



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02291

Project Name Radiological Building Survey		PO Number N/A		G A M M A S P E C		S R 9 0 A		A L P H A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section	
Project Location HUNTERS POINT		Project Number 4044-0007		Airbill Number N/A		Project Chemist Phone 949-758-7592				LABORATORY ID			
Sampler Name <i>Lisa Bienkowski</i>													
Project Chemist LISA BIENKOWSKI													
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T 1 1	I 1 1	I 1 1	COMMENTS	LOCATION	SAMPLE ID		
07517-S0002-F115-01	3/5/2012	1235	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>					
07517-S0002-F116-01	3/5/2012	1240	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>					
07517-S0002-F117-01	3/5/2012	1245	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>					
07517-S0002-F118-01	3/5/2012	1250	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>					

Relinquished by: (signature) <i>[Signature]</i>	Date 3-5-12	Received by: (signature) <i>[Signature]</i>	LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS BAG SITE SU-2 CHARACTERIZATION HS-118	
Company CRS	Time 1529	Company CR	COMPOSITE DESCRIPTION			
Relinquished by: (signature)	Date	Received by: (signature)	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)			
Company	Time	Company	TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:			
Relinquished by: (signature)	Date	Received by: (signature)				
Company	Time	Company				



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02345

Page 1 of 1

Project Name Radiological Building Survey		PO Number N/A		G A M A S P E C		A L P H A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section	
Project Location HUNTERS POINT		Project Number 4044-0007		T A T				LABORATORY ID			
Sampler Name J. Rolfe		Airbill Number N/A									
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592									
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	1	1	1	COMMENTS	LOCATION	SAMPLE ID
07517-S0002-F119-01	4/2/2012	1450	1		S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
07517-S0002-F120-01	4/2/2012	1455	1		S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
07517-S0002-F121-01	4/2/2012	1500	1		S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
07517-S0002-F122-01	4/2/2012	1505	1		S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			

Relinquished by: (signature) J. Rolfe		Date 4-2-12		Received by: (signature) [Signature]	
Company RSPS		Time 15:45		Company CST	
Relinquished by: (signature)		Date		Received by: (signature)	
Company		Time		Company	
Relinquished by: (signature)		Date		Received by: (signature)	
Company		Time		Company	
LABORATORY INSTRUCTIONS/COMMENTS				COMPOSITE DESCRIPTION	
SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY) TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:				SAMPLING COMMENTS BLDG 517 SITE SU-2 POST-REMEDIATION 119-172	



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02358

Project Name Radiological Building Survey		PO Number N/A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section			
Project Location HUNTERS POINT		Project Number 4044-0007		LABORATORY ID					
Sampler Name J. Rolfe		Airbill Number N/A							
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592							
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	COMMENTS	LOCATION	SAMPLE ID
07517-S0002-F123-01	4/10/2012	1130	1		S				
07517-S0002-F124-01	4/10/2012	1135	1		S				
07517-S0002-F125-01	4/10/2012	1140	1		S				
07517-S0002-F126-01	4/10/2012	1145	1		S				
07517-S0002-F127-01	4/10/2012	1150	1		S				
07517-S0002-F128-01	4/10/2012	1155	1		S				
07517-S0002-F129-01	4/10/2012	1235	1		S				
07517-S0002-F130-01	4/10/2012	1240	1		S				
07517-S0002-F131-01	4/10/2012	1245	1		S				
07517-S0002-F132-01	4/10/2012	1250	1		S				
07517-S0002-F133-01	4/10/2012	1255	1		S				
07517-S0002-F134-01	4/10/2012	1300	1		S				

Relinquished by: (signature)	Date	Received by: (signature)	LABORATORY INSTRUCTIONS/COMMENTS	SAMPLING COMMENTS
Company	Time	Company	COMPOSITE DESCRIPTION	BUDGE SITE
Relinquished by: (signature)	Date	Received by: (signature)	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)	50-2
Company	Time	Company	TEMPERATURE	SYSTEMATIC 125-150
Relinquished by: (signature)	Date	Received by: (signature)	SAMPLE CONDITION	
Company	Time	Company	COOLER SEAL	



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02359

Project Name Radiological Building Survey		PO Number N/A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section			
Project Location HUNTERS POINT		Project Number 4044-0007		LABORATORY ID					
Sampler Name J. Rolfe		Airbill Number N/A							
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592							
SAMPLE ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	COMMENTS	LOCATION	SAMPLE ID
07517-S0002-F135-01	4/10/2012	1305	1		S		<input checked="" type="checkbox"/>		
07517-S0002-F136-01	4/10/2012	1310	1		S		<input checked="" type="checkbox"/>		
07517-S0002-F137-01	4/10/2012	1315	1		S		<input checked="" type="checkbox"/>		
07517-S0002-F138-01	4/10/2012	1320	1		S		<input checked="" type="checkbox"/>		
07517-S0002-F139-01	4/10/2012	1325	1		S		<input checked="" type="checkbox"/>		
07517-S0002-F140-01	4/10/2012	1330	1		S		<input checked="" type="checkbox"/>		
07517-S0002-F141-01	4/10/2012	1335	1		S		<input checked="" type="checkbox"/>		
07517-S0002-F142-01	4/10/2012	1340	1		S		<input checked="" type="checkbox"/>		
07517-S0002-F143-01	4/10/2012	1345	1		S		<input checked="" type="checkbox"/>		
07517-S0002-F144-01	4/10/2012	1350	1		S		<input checked="" type="checkbox"/>		
07517-S0002-F145-01	4/10/2012	1355	1		S		<input checked="" type="checkbox"/>		
07517-S0002-F146-01	4/10/2012	1400	1		S		<input checked="" type="checkbox"/>		

Relinquished by: <i>[Signature]</i>		Date: 4-10-12		Received by: (signature) <i>[Signature]</i>		LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS	
Company: RSR		Time: 11:10		Company: OGT		COMPOSITE DESCRIPTION			
Relinquished by: (signature)		Date		Received by: (signature)		SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)			
Company		Time		Company		TEMPERATURE: SAMPLE CONDITION: COOLER/SEAL:			
Relinquished by: (signature)		Date		Received by: (signature)					
Company		Time		Company					



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

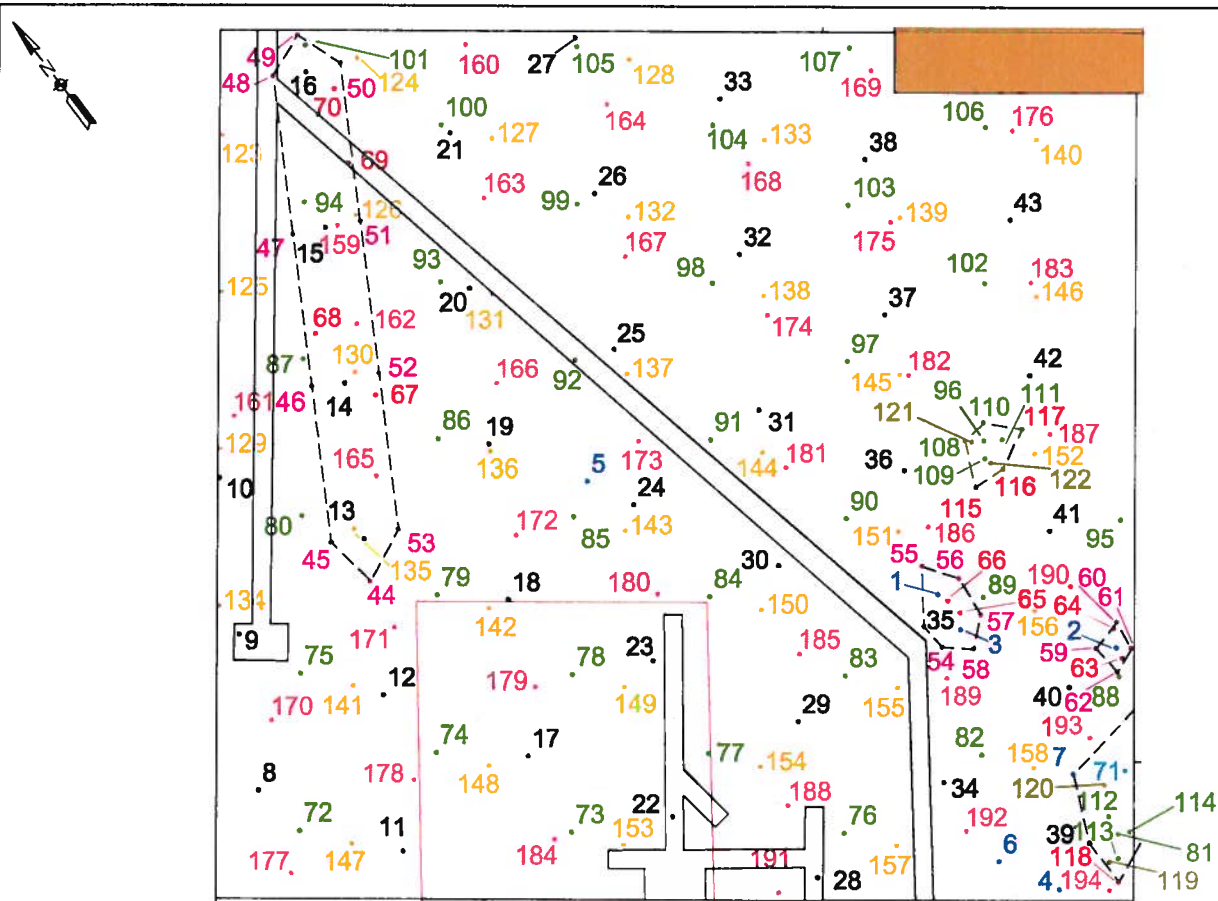
Chain-of-Custody Record

BFS 02360

Project Name Radiological Building Survey		PO Number N/A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section	
Project Location HUNTERS POINT		Project Number 4044-0007		LABORATORY ID			
Sampler Name J. Rolfe		Airbill Number N/A					
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592					
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	COMMENTS	SAMPLE ID
07517-S0002-F147-01	4/10/2012	1405	1		S		
07517-S0002-F148-01	4/10/2012	1410	1		S		
07517-S0002-F149-01	4/10/2012	1415	1		S		
07517-S0002-F150-01	4/10/2012	1420	1		S		
07517-S0002-F151-01	4/10/2012	1425	1		S		
07517-S0002-F152-01	4/10/2012	1430	1		S		
07517-S0002-F153-01	4/10/2012	1435	1		S		
07517-S0002-F154-01	4/10/2012	1440	1		S		
07517-S0002-F155-01	4/10/2012	1445	1		S		
07517-S0002-F156-01	4/10/2012	1450	1		S		
07517-S0002-F157-01	4/10/2012	1455	1		S		
07517-S0002-F158-01	4/10/2012	1500	1		S		

Relinquished by: (signature) Company RSRs		Received by: (signature) Company C&T		LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS	
Relinquished by: (signature) Company		Received by: (signature) Company		COMPOSITE DESCRIPTION			
Relinquished by: (signature) Company		Received by: (signature) Company		SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)			
Relinquished by: (signature) Company		Received by: (signature) Company		TEMPERATURE, SAMPLE CONDITION, COOLER SEAL			

P:\CTO-07 CAD FILES (RAD EMAC)\DWG FILES\500 SERIES\500 SERIES.DWG
PLOT/UPDATE: OCT 24 2012 11:51:43



LEGEND:

- 1 BIASED 1 1-7
- 8 SYSTEMATIC 1 8-43
- 44 CHARACTERIZATION 1 44-62
- 63 POST-REMEDATION 1 63-70
- 71 BIASED 2 71
- 72 SYSTEMATIC 2 72-107
- 108 CHARACTERIZATION 2 108-114
- 115 CHARACTERIZATION 3 115-118
- 119 POST-REMEDATION 2 119-122
- 123 SYSTEMATIC 3 123-158
- 159 SYSTEMATIC 4 159-194



CONCRETE



REMEDIATED AREA



FORMER BUILDING 517 SITE

SCALE 1:30

1875.86 m²

RECORD COPY

HUNTERS POINT NAVAL SHIPYARD
SAN FRANCISCO, CA
P.O. BOX 884836
SAN FRANCISCO, CA 94188

500 SERIES SURVEY UNITS
CLASS 1 SURVEY UNIT
517 SU-02



TETRA TECH EC, INC
1230 COLUMBIA STREET, SUITE 750
SAN DIEGO, CA 92101
TEL: (619) 234-8690 FAX: (619) 234-8591

Chiu, George

From: Chiu, George
Sent: Friday, June 22, 2012 1:10 PM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Rolfe, Stephen; Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - Building 517 Survey Unit 02
Attachments: 07517-S0002 123 to 158 Off-Site Gamma.pdf; 07517-S0002 Sr.pdf

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the off-site gamma spec and strontium results for the systematic samples from Building 517 Survey Unit 02.

George Chiu | Health Physicist
Office: 415.216.2745 | Cell: 714.270.4009
george.chiu@tetrattech.com

Radiological Survey & Remedial Services
100 Washington Street Suite 200 | Reno, NV 89503
www.radsvcs.com

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Think Green - Not every email needs to be printed.

From: Chiu, George
Sent: Monday, April 23, 2012 1:17 PM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Rolfe, Stephen; Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - Building 517 Survey Unit 02

Allen/Laurie/Matt/Pat/Zach:

Attached for your review are the on-site systematic sampling results from Building 517 Survey Unit 02. Samples 125, 132, 142, 145, 145DUP, 149, 150, 152, 154, and 157 were recounted for a longer duration at the direction of the laboratory manager.

According to the TSP for the Former Building 517 Site, 100% of the final systematic will be analyzed by gamma spectroscopy at a DoD ELAP approved laboratory. Additionally, 10% of the final systematic will be analyzed for total strontium.

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From: Chiu, George

Sent: Wednesday, April 18, 2012 4:56 PM

To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)

Cc: Rolfe, Stephen; Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan

Subject: HPS Data - Building 517 Survey Unit 02

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the revised post-remediation sampling results from Building 517 Survey Unit 02. Samples 119 and 120 were recounted for a longer duration in order to meet the Co-60 MDA requirement in the Sampling and Analysis Plan Revision 1.

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From: Chiu, George

Sent: Sunday, April 08, 2012 10:57 AM

To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)

Cc: Rolfe, Stephen; Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan

Subject: HPS Data - Building 517 Survey Unit 02

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the post-remediation sampling results from Building 517 Survey Unit 02.

We will proceed with the systematic sampling of this survey unit.

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From: Chiu, George

Sent: Sunday, March 18, 2012 11:14 AM

To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)

Cc: Rolfe, Stephen; Abkemeier, Erik; Berry, Adam; Bray, Jeff; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan

Subject: HPS Data - Building 517 Survey Unit 02

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the characterization sampling results from Building 517 Survey Unit 02. Samples 115, 117, and 118 were recounted for a longer duration at the direction of the laboratory manager.

We will proceed with remediation followed by post-remediation sampling.

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From: Chiu, George

Sent: Friday, March 02, 2012 1:25 PM

To: Allen Stambaugh (allen.stambaugh@navy.mil); Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)

Cc: Rolfe, Stephen; Abkemeier, Erik; Berry, Adam; Bray, Jeff; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan

Subject: HPS Data - Building 517 Survey Unit 02

Allen/Laurie/Matt/Pat/Zach:

Attached for your review are the characterization sampling results from Building 517 Survey Unit 02. All samples were recounted for a longer duration at the direction of the laboratory manager.

We will proceed with characterization/remediation around the following sample points due to radium-226 activity:


Sample ID	Ra-226 (pCi/g)
07517-S0002-F109-01	1.855
07517-S0002-F111-01	1.682
07517-S0002-F112-01	2.123

07517-S0002-F113-01	1.801
07517-S0002-F114-01	2.199

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From: Chiu, George
Sent: Monday, February 20, 2012 8:42 AM
To: Allen Stambaugh (allen.stambaugh@navy.mil); Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Rolfe, Stephen; Abkemeier, Erik; Berry, Adam; Bray, Jeff; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - Building 517 Survey Unit 02

Allen/Laurie/Matt/Pat/Zach:


Attached for your review are the on-site bias and systematic sampling results from Building 517 Survey Unit 02. Samples 71, 77, 81, 82, 84 - 86, 88 - 93, 95 - 98, 101 - 104, and 103DUP were recounted for a longer duration at the direction of the laboratory manager.

We will proceed with characterization/remediation around sample points 81 (1.647 pCi/g) and 96 (2.405 pCi/g) due to radium-226 activity.

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 **Think Green - Not every email needs to be printed.**

From: Chiu, George
Sent: Sunday, January 29, 2012 4:49 PM
To: Allen Stambaugh (allen.stambaugh@navy.mil); Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Rolfe, Stephen; Abkemeier, Erik; Berry, Adam; Bray, Jeff; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - Building 517 Survey Unit 02

Allen/Laurie/Matt/Pat/Zach:

Attached for your review are the post-remediation sampling results from Building 517 Survey Unit 02. Samples 63, 64, 65, 66, 67, 69 and 70 were recounted for a longer duration at the direction of the laboratory manager.

Since the survey unit boundary was extended due to characterization/remediation, we will proceed with a gamma scan followed by the bias/systematic sampling of this survey unit.

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From: Chiu, George

Sent: Thursday, January 26, 2012 12:22 PM

To: Allen Stambaugh (allen.stambaugh@navy.mil); Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Rolfe, Stephen; Abkemeier, Erik; Berry, Adam; Bray, Jeff; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - Building 517 Survey Unit 02


Allen/Laurie/Matt/Pat/Zach:

Attached for your review are the revised bias, systematic, and characterization sampling results from Building 517 Survey Unit 02. Samples were recounted for a longer duration in order to meet the Co-60 MDA requirement in the Sampling and Analysis Plan Revision 1.

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From: Chiu, George

Sent: Tuesday, January 17, 2012 9:58 PM

To: Allen Stambaugh (allen.stambaugh@navy.mil); Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Rolfe, Stephen; Abkemeier, Erik; Berry, Adam; Bray, Jeff; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - Building 517 Survey Unit 02

Allen/Laurie/Matt/Pat/Zach:


Attached for your review are the characterization sampling results from Building 517 Survey Unit 02.

We will proceed with remediation followed by post-remediation sampling.

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From: Chiu, George
Sent: Friday, January 06, 2012 2:51 PM
To: Allen Stambaugh (allen.stambaugh@navy.mil); Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Rolfe, Stephen; Abkemeier, Erik; Berry, Adam; Bray, Jeff; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - Building 517 Survey Unit 02

Allen/Laurie/Matt/Pat/Zach:

Attached for your review are the on-site bias and systematic sampling results from Building 517 Survey Unit 02. Samples 01, 02, 03, 05, 13, 14, 15, 16, 25, and 42 were recounted for a longer duration at the direction of the laboratory manager. Also attached are the gamma scans, statics, and exposure rate measurements.


We will proceed with characterization/remediation around the following sample points due to radium-226 activity:

Sample ID	Ra-226 (pCi/g)
07517-S0002-F001-01	1.793
07517-S0002-F002-01	1.729
07517-S0002-F003-01	1.838
07517-S0002-F013-01	3.803
07517-S0002-F014-01	2.481
07517-S0002-F015-01	2.046
07517-S0002-F016-01	1.784

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TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: December 12, 2011

RAD EMAC – CTO 002

Overview

The HPNS Team continued field activities for Work Areas #33, #34, and #35. Details of the work activities performed are provided in the sections below.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

- The HPNS Team excavated approximately 408 cubic yards of soil from Work Areas #34 and #35 and transferred the material to RSY4 for processing. Excavation activities were performed for the following trench segments:
 - 02-C34-28-1C 27 linear feet completed
 - 02-C34-28-1D 39 linear feet completed
 - 02-C34-28-1K 59 linear feet completed
 - 02-C34-28-1L 66 linear feet completed
 - 02-C34-28-1M 60 linear feet completed
 - 02-C34-28-6C 6 linear feet completed
 - 02-C35-00-8A 10 linear feet completed
- A total of 257 linear feet of trench (including excavated soil, manholes, and pipes) identified on the design drawings and 10 linear feet not identified on the design drawings was completed by the HPNS Team.
- Manholes MH1045 and MH1047 and pipe sections excavated from trench segments 02-C34-28-1C, -1D, -1K, -1L, -1M, -6C, and 02-C35-00-8A were placed on plastic pending further activities.
- Survey activities were performed by the HPNS Team for excavated Manholes MH1011, MH1027, and MH1329 (Survey No. HPS-PCPIPE-121211-040). A total of 6 swipe samples were collected and submitted to the on-site laboratory for analysis.
- The RSOR provided the HPNS Team with pipe survey results (Survey Nos. HPS-PCPIPE-120611-037 and HPS-PCPIPE-120711-038). No activity above the release criteria was identified.
- The HPNS Team continued paving along Lockwood Street and Spear Avenue over backfilled trench units in Work Areas #33 and #35.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report



TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: December 12, 2011

RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

- The HPNS Team performed the following RSY2 processing activities:
 - Towed array survey activities were performed for ES Unit 0621
 - Issued drawing to identify biased and systematic sample collection locations for ES Unit 0621.
- The HPNS Team performed the following RSY4 processing activities:
 - A total of 34 truckloads of material were received for processing.
 - ES Unit 0633 was prepared for upcoming towed array survey activities.
 - Collected 1 biased and 18 systematic soil samples from both ES Units 0615 and 0631 and submitted to the on-site laboratory for analysis.
 - Staged ES Units 0557 and 0616 in the stockpile area pending receipt of the off-site analytical results.
 - ES Units 0627 and 0632 were prepared for transfer to the stockpile area.
- The HPNS Team continued radiological monitoring and control activities for the RSYs including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring, as appropriate.
- After evaluating the data, the RASO concurred with the following:
 - Transfer of ES Units 0606, 0607, and 0609 to the DON non-LLRW contractor for off-site disposal at a CERCLA landfill.
 - Reuse of ES Unit 0581 as trench backfill.
 - Staging ES Units 0627 and 0632 pending receipt of the off-site analytical results.

On-Site and Off-Site Laboratories

- On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:
 - Soil samples received for gamma spectroscopy analysis: 403
 - Swipe samples received for Protean counts: 154
 - Air samples received: 1
 - Samples analyzed by gamma spectroscopy: 112
 - Gamma spectroscopy samples recounted: 4
 - Protean swipe samples counted: 104
 - Protean air samples counted: 1
- A total of 729 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.

Basewide Support

- Portal Monitor Activities
 - A total of 56 empty trucks entered HPNS through the portal monitor with no alarms.
 - A total of 59 truckloads of material exited HPNS through the portal monitor with no alarms.
- Radiological support was provided to CKY by the HPNS Team during landscaping activities at Parcel E-2.
- One incoming materials and equipment survey was performed by the HPNS Team.



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel E and Building 500 Series Removal Action

Report Date: December 12, 2011	RMAC – CTO 07
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Overview

The HPNS Team continued field activities for Building 521, the Buildings 506, 507, 509, 510/510A, and 517 Sites, the Building 500 Series Area, and Work Area #36. Details of the activities performed are provided in the sections below.

Building 506 Site

- Soil grading activities were performed by the HPNS Team in preparation for upcoming gamma scan surveys.

Building 507 Site

- The HPNS Team performed exploratory excavations to identify the spatial extent of the building foundation and to estimate the volume of debris requiring removal.

Building 509 Site

- The HPNS Team provided the RASO with on-site analytical and survey results for the biased and systematic samples collected from Class 1 Survey Unit 2. Because no activity above the release criteria was identified, the systematic samples will be submitted to the off-site laboratory for analysis.

Building 517 Site

- The HPNS Team performed Class 1 survey activities for Survey Unit 2. A total of 7 biased and 36 systematic gamma static measurements were logged with a maximum measurement of 9,464 cpm. In addition, 43 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

Building 521

- The HPNS Team performed Class 1 survey activities for Survey Unit 6. A total of 200 alpha/beta scan readings were logged. The preliminary data does not indicate the presence of alpha/beta activity above the release limits. The RSO is in the process of reviewing these data.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- Backfill activities were initiated for Trench Unit No. 215 by the HPNS Team.
- The HPNS Team and the RASO concurred with backfilling Trench Unit No. 223.
- A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report
- Task-specific Plans



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: January 12, 2012

RAD EMAC – CTO 002

Overview

The HPNS Team continued field activities in Work Areas #31, #33, and #34. Details of the work activities performed are provided in the sections below.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

- Backfill activities were continued in Trench Unit No. 231 by the HPNS Team.
- The RSOR provided the HPNS Team with survey results for the excavated manhole detailed in Survey No. HPS-PCPIPE-010612-043 and pipe sections detailed in Survey No. HPS-PCPIPE-010612-044. Because no activity above the release criteria was identified, these manholes and pipe sections were released and staged for transfer to the DON non-LLRW waste contractor.
- The RSOR provided the HPNS Team with survey results for the pipe sections detailed in Survey No. HPS-PCPIPE-010912-045; no activity above the release criteria was identified. These pipe sections will remain in place due to proximity to the Building 208 foundation and Drydock Nos. 2 and 3.
- The HPNS Team provided the RASO with analytical results for the systematic samples collected from Trench Unit No. 237; no activity above the release criteria was identified.
- The HPNS Team provided the RASO with analytical results for the investigative samples collected from Trench Unit No. 238. Characterization and remediation will be performed due to ^{226}Ra activity above the release criteria as follows:
 - Sample Point 8 (02-PCT-238-008) with ^{226}Ra at 1.784 pCi/g
 - Sample Point 10 (02-PCT-238-010) with ^{226}Ra at 1.894 pCi/g
- The HPNS Team provided the RASO with the Internal Draft SUPR for Trench Unit No. 234 along with a request for backfill concurrence.
- The HPNS Team continued swale and drain pipe installation and site restoration activities along previously backfilled trench units in Work Area #33.
- A variety of housekeeping activities were performed throughout Parcel C by the HPNS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report



TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: January 12, 2012	RMAC – CTO 004
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Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

- The HPNS Team performed the following RSY4 processing activities:
 - ES Units 0422 and 0628 were staged in the stockpile areas pending receipt of the off-site analytical results.
 - Began transfer of ES Unit 0633 to the stockpile area.
- The HPNS Team continued radiological monitoring and control activities for the RSYs including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring, as appropriate.
- The on-site analytical data for ES Unit 0630 was submitted to the RASO for review with a request for concurrence to stage the material pending receipt of the off-site analytical results.

On-Site and Off-Site Laboratories

- On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:
 - Soil samples received for gamma spectroscopy analysis: 43
 - Swipe samples received for Protean counts: 94
 - Air samples received: 6
 - Samples analyzed by gamma spectroscopy: 153
 - Gamma spectroscopy samples recounted: 5
 - Protean swipe samples counted: 22
 - Protean air samples counted: 6

- A total of 389 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.
- A total of 80 samples were sent to TestAmerica St. Louis for analysis.

Basewide Support

- Portal Monitor Activities
 - A total of 57 empty trucks entered HPNS through the portal monitor with no alarms.
 - A total of 57 truckloads of material exited HPNS through the portal monitor with no alarms.
- A total of five outgoing materials and equipment surveys were performed by the HPNS Team.



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel E and Building 500 Series Removal Action

Report Date: January 12, 2012	RMAC – CTO 07
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Overview

The HPNS Team continued field activities for Building 521, the Buildings 510/510A, 517, and 520 Sites, the Building 500 Series Area, and Work Area #36. Details of the activities performed are provided in the sections below.

Building 510/510A Site

- The HPNS Team performed towed array gamma scan surveys over Survey Unit 1.
- Approximately 120 cubic yards of asphalt and concrete was removed, scanned, and transferred to the Salvage Yard pending receipt of the Class 1 soil survey unit results.

Building 517 Site

- The HPNS Team performed Class 1 survey activities for Survey Unit 2. A total of 19 characterization gamma static measurements were logged with a maximum measurement of 9,558 cpm. In addition, 19 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is the process of reviewing these data.

Building 520 Site

- The HPNS Team provided the RASO with on-site analytical and survey results for the biased and systematic samples collected from Class 1 Survey Unit 5. Characterization and remediation will be performed due to ^{137}Cs contamination as follows:
 - Sample Point 5 (07520-S0005-F005-01) with ^{137}Cs at 0.2651 pCi/g
 - Sample Point 7 (07520-S0005-F007-01) with ^{137}Cs at 0.2606 pCi/g
 - Sample Point 9 (07520-S0005-F009-01) with ^{137}Cs at 0.2713 pCi/g
 - Sample Point 23 (07520-S0005-F023-01) with ^{137}Cs at 0.2491 pCi/g
 - Sample Point 24 (07520-S0005-F024-01) with ^{137}Cs at 0.1239 pCi/g

Building 521

- The HPNS Team continued Class 3 survey activities for Survey Unit 8. A total of 20 gamma static measurements were logged with a maximum measurement of 6,934 cpm. A total of 20 alpha/beta static measurements also were logged. The preliminary data does not indicate the presence of alpha/beta activity above the release limits. In addition, 20 swipe samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- Survey activities were performed by the HPNS Team for excavated Manholes MH1256, MH1298, MH1299, MH1311, MH1312, MH1313, MH1314, MH1315, MH1316, MH1317, MH1318, MH1327, MH1328, and MH1330 (Survey No. HPS-PEPIPE-011212-042). A total of 28 swipe samples were collected and submitted to the on-site laboratory for analysis.
- The HPNS Team continued pre-survey activities in Work Area #36 including the removal and sizing of metal rebar from concrete pads.
- A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report
- Task-specific Plan



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: January 19, 2012	RAD EMAC – CTO 002
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Overview

The HPNS Team continued field activities for the North Pier and Work Areas #31, #32, and #33. Details of the work activities performed are provided in the sections below.

North Pier

- Pre-survey activities were continued by the HPNS Team including collection of reference area gamma static measurements from Building 270.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

- Soil compaction and testing was continued for previously backfilled areas of Trench Unit No. 231. Based on the results, backfill activities were completed by the HPNS Team in this trench unit.
- The HPNS Team provided the RASO with the Internal Draft SUPR for Trench Unit No. 227 along with a request for concurrence to backfill.
- The HPNS Team conducted storm water pollution prevention activities in Parcel C.
- A variety of housekeeping activities were performed throughout Parcel C by the HPNS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report



TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: January 19, 2012

RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

- The HPNS Team performed the following RSY4 processing activities:
 - Issued drawing to identify characterization sample collection locations for ES Unit 0634.
 - Five biased soil samples were collected from ES Unit 0634 and submitted to the on-site laboratory for analysis.
 - ES Units 0550 and 0630 were staged in the stockpile area pending receipt of the off-site analytical results.
 - Began transfer of ES Unit 0615 to the stockpile area.
- The HPNS Team continued radiological monitoring and control activities for the RSYs including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring, as appropriate.

On-Site and Off-Site Laboratories

- On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:
 - Soil samples received for gamma spectroscopy analysis: 120
 - Swipe samples received for Protean counts: 7
 - Air samples received: 5
 - Samples analyzed by gamma spectroscopy: 58
 - Gamma spectroscopy samples recounted: 41
- A total of 290 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.
- A total of 150 samples were sent to TestAmerica St. Louis for analysis.

Basewide Support

- Portal Monitor Activities
 - A total of 41 empty trucks entered HPNS through the portal monitor with no alarms.
 - A total of 48 truckloads of material exited HPNS through the portal monitor with no alarms.
- A total of two incoming and one outgoing materials and equipment surveys were performed by the HPNS Team.



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: January 19, 2012

RMAC – CTO 07

Overview

The HPNS Team continued field activities for the Buildings 506 and 517 Sites, the 500 Series Area, and Work Area #36. Details of the activities performed are provided in the sections below.

Building 506 Site

- The HPNS Team issued record drawings to identify the post-remediation sample collection locations in Class 1 Survey Unit 4.

Building 517 Site

- Approximately 34 cubic yards of soil was remediated from Survey Unit 2 and placed in LLRW bins GFLU001194T15, GFLU001237T18, and GFLU002048 for disposal.
- The HPNS Team performed Class 1 survey activities for Survey Unit 2. A total of eight post-remediation gamma static measurements were logged with a maximum measurement of 9,946 cpm. In addition, eight soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is the process of reviewing these data

500 Series Area

- The HPNS Team continued preparing the 500 Series Area for towed array survey activities including soil grading and removal of metal rebar from the concrete pad located in Survey Units 12 and 13.
- Approximately 12 cubic yards of asphalt from Survey Unit 8 was removed, scanned, and transferred to the Salvage Yard pending receipt of the Class 1 soil survey unit results.
- The HPNS Team performed gamma scan surveys over Survey Units 19 and 21.
- The HPNS Team performed Class 1 survey activities as follows:
 - Survey Unit 20 – A total of 36 systematic gamma static measurements were logged with a maximum measurement of 7,001 cpm. In addition, 36 soil samples were collected and submitted to the on-site laboratory for analysis.
 - Survey Unit 21 – A total of 36 systematic gamma static measurements were logged with a maximum measurement of 6,803 cpm. In addition, 36 soil samples were collected and submitted to the on-site laboratory for analysis.

- The RSO is in the process of reviewing the survey data for Survey Units 20 and 21.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- Trench segment 07-E36-39-1K crushed pipe debris was placed in LLRW bin GFLU001111 for disposal.
- A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report
- Task-specific Plan



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: February 2, 2012

RAD EMAC – CTO 002

Overview

The HPNS Team continued field activities for the North Pier and Work Areas #32 and #34. Details of the work activities performed are provided in the sections below.

North Pier

- Approximately 492 cubic yards of asphalt covering Survey Units 9, 10, and 11 was removed, scanned, and transferred to Drydock No. 4 pending receipt of the Class 1 survey unit results; no elevated scan readings were identified.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

- The HPNS Team excavated approximately 264 cubic yards of soil from Work Area #34 and transferred the material to RSY4 for processing. Excavation activities were performed for the following trench segments:
 - 02-C34-28-2P 40 linear feet completed
 - 02-C34-28-4B 34 linear feet completed
 - 02-C34-28-4E 116 linear feet completed
- A total of 190 linear feet of trench (including excavated soil, manholes, and pipes) identified on the design drawings was completed by the HPNS Team.
- Manholes MH1007 and MH1009 excavated from trench segments 02-C34-28-2P and 02-C34-28-4E were placed on plastic pending further activities.
- A sediment sample was collected from excavated Manhole MH1007 (02-PCMH1007-060-01) and submitted to the on-site laboratory for analysis.
- Plastic pipe liner associated with trench segments 02-C34-28-2P, -4B, and -4E was placed in LLRW bin GFLU000262 for disposal.
- A variety of housekeeping activities were performed throughout Parcel C by the HPNS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report



TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: February 2, 2012	RMAC – CTO 004
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Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

- The HPNS Team performed the following RSY4 processing activities:
 - A total of 22 truckloads of material were received for processing.
 - Towed array survey activities were performed for ES Unit 0640.
- The HPNS Team continued radiological monitoring and control activities for the RSYs including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring, as appropriate.

On-Site and Off-Site Laboratories

- On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:
 - Soil samples received for gamma spectroscopy analysis: 91
 - Swipe samples received for Protean counts: 7
 - Air samples received: 16
 - Samples analyzed by gamma spectroscopy: 93
 - Gamma spectroscopy samples recounted: 10
 - Protean swipe samples counted: 48
 - Protean air samples counted: 16
- A total of 343 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.
- A total of 35 samples were sent to TestAmerica St. Louis for analysis.

Basewide Support

- Portal Monitor Activities
 - A total of five empty trucks entered HPNS through the portal monitor with no alarms.
 - A total of 41 truckloads of material exited HPNS through the portal monitor with no alarms.
- One outgoing materials and equipment survey was performed by the HPNS Team.



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel E and Building 500 Series Removal Action

Report Date: February 2, 2012	RMAC – CTO 07
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Overview

The HPNS Team continued field activities for the Buildings 506 and 517 Sites, the 500 Series Area, and Work Area #36. Details of the activities performed are provided in the sections below.

Building 517 Site

- The HPNS Team performed Class 1 survey activities for Survey Unit 2. A total of 1 biased and 36 systematic gamma static measurements were logged with a maximum measurement of 8,805 cpm. In addition, 37 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

500 Series Area

- The HPNS Team continued soil grading and debris removal for the 500 Series Area in preparation for towed array survey activities.
- The HPNS Team performed towed array gamma scan surveys over Survey Unit 18.
- The HPNS Team performed Class 1 survey activities as follows:
 - Survey Unit 6 – A total of 4 biased gamma static measurements were logged with a maximum measurement of 7,710 cpm. In addition, 4 soil samples were collected and submitted to the on-site laboratory for analysis.
 - Survey Unit 8 – A total of 4 biased gamma static measurements were logged with a maximum measurement of 8,550 cpm. In addition, 4 soil samples were collected and submitted to the on-site laboratory for analysis.
- The RSO is in the process of reviewing the survey data for Survey Units 6 and 8.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- Approximately 10 cubic yards of soil was remediated from Trench Unit No. 225 (trench segment 07-E36-14-1Q) by the HPNS Team and placed in LLRW bins BFLU000011, GFLU001149T17, and GFLU001237T18 for off-site disposal.
- Approximately 5 cubic yards of soil was remediated from Trench Unit No. 228 (trench segment 07-E36-14-1E) by the HPNS Team and placed in LLRW bin BFLU000011 for off-site disposal.

- A total of 23 investigative samples were collected from Trench Unit No. 241 by the HPNS Team and submitted to the on-site laboratory for analysis.
- The HPNS Team issued drawings to identify locations for investigative sample collection in Trench Unit No. 241.
- A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: February 21, 2012

RAD EMAC – CTO 002

Overview

The HPNS Team continued field activities for the North Pier and Work Areas #31 and #32. Details of the work activities performed are provided in the sections below.

North Pier

- The HPNS Team continued removing railroad ties and track and performing soil grading; metal track and wooden ties were sized and staged pending further activities.
- Survey activities were performed by the HPNS Team on metal railroad plates and rail spikes (Survey Nos. HPS-A-NPR-008 and HPS-A-NPR-009); a total of 108 swipe samples were collected and submitted to the on-site laboratory for analysis.
- The RSOR provided the HPNS Team with survey results for metal rail plates and spikes, and wooden railroad ties detailed in Survey Nos. HPS-A-NPR-002, HPS-A-NPR-003, and HPS-A-NPR-004. Because no activity above the release criteria was identified, 108 items were released and prepared for transfer to the recycling stockpiles near Building 411.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

- A total of 18 systematic samples were collected from Trench Unit No. 236 by the HPNS Team and submitted to the on-site laboratory for analysis.
- A variety of housekeeping activities were performed throughout Parcel C by the HPNS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report



TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: February 21, 2012

RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

- The HPNS Team performed the following RSY4 processing activities:
 - A total of 32 truckloads of material were received for processing.
 - Towed array survey activities were performed for ES Unit 0618.
 - Collected 10 biased and 18 systematic soil samples from ES Unit 0642 and submitted to the on-site laboratory for analysis.
 - ES Unit 0639 was staged in the stockpile area pending receipt of the off-site analytical results.
 - Began transfer of ES Unit 0641 to the stockpile area.
- The HPNS Team continued radiological monitoring and control activities for the RSYs including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring, as appropriate.
- The HPNS Team provided the RASO with the off-site laboratory analytical results for ES Unit 0635 and a request for concurrence to use the material as trench backfill.
- After evaluating the data, the RASO concurred with the following:
 - Staging of ES Unit 0641 pending receipt of the off-site analytical data prior to transferring the material to the DON non-LLRW contractor for disposal at a CERCLA landfill.
 - Staging ES Unit 0636 pending receipt of the off-site analytical results.

Basewide Support

- One outgoing materials and equipment survey was performed by the HPNS Team.

On-Site and Off-Site Laboratories

- On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:
 - Soil samples received for gamma spectroscopy analysis: 53
 - Swipe samples received for Protean counts: 72
 - Air samples received: 8
 - Samples analyzed by gamma spectroscopy: 71
 - Gamma spectroscopy samples recounted: 22
 - Protean air samples counted: 18
- A total of 280 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.
- A total of 137 samples were sent to TestAmerica St. Louis for analysis.



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: February 21, 2012

RMAC – CTO 07

Overview

The HPNS Team continued field activities for Building 521, the Building 517 Site, Shacks 79 and 80, the 500 Series Area, and Work Area #36. Details of the activities performed are provided in the sections below.

Building 517 Site

- The HPNS Team performed Class 1 survey activities for Survey Unit 2. A total of 7 characterization gamma static measurements were logged with a maximum measurement of 8,894 cpm. In addition, 7 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

Building 521

- Vent and drain surveys were performed by the HPNS Team for the furnace system and exhaust stacks; a total of 20 swipe sample were collected and submitted to the on-site laboratory for analysis (Survey No. HPS-VD-B521-001).

Shacks 79 and 80

- The HPNS Team provided the RASO with off-site analytical and survey results for the biased and systematic samples collected from Class 1 Survey Unit 1. Characterization and remediation will be performed due to the presence of ^{137}Cs contamination as follows:
 - Sample Point 5 (077980-S0001-F005-01) with ^{137}Cs at 0.131 pCi/g
 - Sample Point 19 (077980-S0001-F019-01) with ^{137}Cs at 0.125 pCi/g

500 Series Area

- The HPNS Team excavated approximately 384 cubic yards of sand/soil material from Survey Units 12 and 13 and transferred the materials to RSY4 for further activities.
- Towed array gamma scan surveys were performed over Survey Units 15 and 16.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- Backfill activities were completed for Trench Unit Nos. 217 and 224 by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: March 5, 2012	RAD EMAC – CTO 002
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Overview

The HPNS Team continued field activities for the North Pier and Work Areas #32, #33, and #35. Details of the work activities performed are provided in the sections below.

North Pier

- The HPNS Team performed towed array gamma scan surveys over Survey Unit 5.
- Perimeter fencing maintenance and reconfiguration activities were performed on the west end of Work Area #32 near Blandy Street.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

- Backfill activities were initiated in Trench Unit No. 232 by the HPNS Team.
- A variety of housekeeping activities were performed throughout Parcel C by the HPNS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report



TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: March 05, 2012	RMAC – CTO 004
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Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

- The HPNS Team received a total of 27 truckloads of material at RSY4 for processing.
- The HPNS Team continued radiological monitoring and control activities for the RSYs including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring, as appropriate.

On-Site and Off-Site Laboratories

- On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:
 - Soil samples received for gamma spectroscopy analysis: 14
 - Swipe samples received for Protean counts: 85
 - Air samples received: 6
 - Samples analyzed by gamma spectroscopy: 60
 - Gamma spectroscopy samples recounted: 11
 - Protean swipe samples counted: 61
 - Protean air samples counted: 5
- A total of 249 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: March 5, 2012	RMAC – CTO 07
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Overview

The HPNS Team continued field activities for the Building 517 Site, the 500 Series Area, and Work Area #36. Details of the activities performed are provided in the sections below.

Building 517 Site

- The HPNS Team performed Class 1 survey activities for Survey Unit 2. A total of four characterization gamma static measurements were logged with a maximum measurement of 7,884 cpm. In addition, four soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPNS Team issued drawings to identify locations for characterization sample collection in Class 1 Survey Unit 2.

500 Series Area

- The HPNS Team resumed excavation of the sand/soil from Survey Unit 13 and staged the material pending transfer to the RSY4 for processing.
- Towed array gamma scan surveys were performed over Survey Unit 2.
- The HPNS Team performed Class 1 survey activities as follows:
 - Survey Unit 3 – A biased gamma static measurements was logged with a measurement of 6,661 cpm. In addition, one soil sample was collected and submitted to the on-site laboratory for analysis.
 - Survey Unit 15 – A total of eight characterization gamma static measurements were logged with a maximum measurement of 6,077 cpm. In addition, eight soil samples were collected and submitted to the on-site laboratory for analysis.
- The RSO is in the process of reviewing the survey data for Survey Units 3 and 15.
- The HPNS Team issued drawings to identify locations for biased sample collection in Class 1 Survey Unit 3 and locations for characterization sample collection in Class 1 Survey Unit 15.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- The HPNS Team excavated approximately 324 cubic yards of soil from Work Area #36 and transferred the material to RSY4 for processing. Excavation activities were performed for the following trench segments:
 - 07-520-14-2A 35 linear feet completed
 - 07-520-14-2B 6 linear feet completed
 - 07-E36-00-4N 28 linear feet completed
 - 07-E36-00-4P 86 linear feet completed
 - 07-E36-00-4Q 65 linear feet completed
 - 07-E36-00-4T 3 linear feet completed
 - 07-E36-14-2A 28 linear feet completed
- A total of 251 linear feet of trench (including excavated soil and pipes) identified on the design drawings was completed by the HPNS Team.
- Pipe excavated from trench segment 07-E36-00-4P were placed on plastic pending further activities.
- The HPNS Team investigated trench segments 07-520-14-2A and 07-520-14-2B for the presence of pipe. Although depicted on the design drawing, no pipe was found during these investigations
- A sediment sample was collected from pipe excavated from trench segment 07-E36-00-4P (07-PEPI-0026-01) by the HPNS Team and submitted to the on-site laboratory for analysis.
- Backfill activities were completed for Trench Unit No. 235 by the HPNS Team.
- The HPNS Team issued an updated Parcel E Trench Survey Unit Key Plan.
- A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: April 2, 2012

RAD EMAC – CTO 002

Overview

The HPNS Team continued field activities for the North Pier and Work Areas #34 and #35. Details of the work activities performed are provided in the sections below.

North Pier

- Approximately 312 cubic yards of asphalt removed from Survey Unit 5 was transferred by the HPNS Team to the Building 411 recycling stockpiles.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

- The RSOR provided the HPNS Team with survey results for the excavated manholes detailed in Survey Nos. HPS-PCPIPE-032812-047 and HPS-PCPIPE-032812-048. Because no activity above the release criteria was identified, these 22 manholes were released for transfer to the recycling stockpiles near Building 411.
- A variety of housekeeping activities were performed throughout Parcel C by the HPNS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report



TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: April 2, 2012

RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

- The HPNS Team performed the following RSY4 processing activities:
 - A total of 37 truckloads of material were received for processing.
 - Began transfer of ES Unit 0653 to the stockpile area.
- The HPNS Team continued radiological monitoring and control activities for the RSYs including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring, as appropriate.

On-Site and Off-Site Laboratories

- On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:
 - Soil samples received for gamma spectroscopy analysis: 5
 - Air samples received: 8
 - Samples analyzed by gamma spectroscopy: 66
 - Gamma spectroscopy samples recounted: 15
 - Protean swipe samples counted: 16
 - Protean air samples counted: 7
- A total of 127 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.

Basewide Support

- Portal Monitor Activities
 - A total of 57 empty trucks entered HPNS through the portal monitor with no alarms.
 - A total of 57 truckloads of material exited HPNS through the portal monitor with no alarms.



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel E and Building 500 Series Removal Action

Report Date: April 2, 2012	RMAC – CTO 07
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Overview

The HPNS Team continued field activities for Building 506, the Building 517 Site, Shacks 79 and 80, the 500 Series Area, and Work Area #36. Details of the activities performed are provided in the sections below.

Building 517 Site

- The HPNS Team performed Class 1 survey activities for Survey Unit 2. A total of four post-remediation gamma static measurements were logged with a maximum measurement of 6,846 cpm. In addition, four soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

Shacks 79 and 80

- The HPNS Team prepared Survey Unit 3 for additional towed array survey activities including the removal of asphalt exposed during perimeter fencing modifications.
- The HPNS Team issued drawings to identify locations for characterization sample collection in Class 1 Survey Unit 1.

500 Series Area

- The HPNS Team continued soil grading and debris removal in preparation for upcoming towed array surveys in Class 2 Survey Units 22 and 23.
- Approximately 52 cubic yards of soil was remediated from Survey Units 1 and 3 by the HPNS Team and placed in LLRW bins ERRU000151, GFLU002020, and GFLU002136 for off-site disposal.
- The HPNS Team performed Class 1 survey activities for Survey Unit 1. A systematic gamma static measurement was logged at 4,448 cpm. In addition, a soil sample was collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPNS Team provided the RASO with total strontium analytical results for the elevated samples collected from Class 1 Survey Units 9, 17, 20, and 21; no further contamination was identified.

- The HPNS Team issued drawings to identify locations for remediation in Class 1 Survey Units 1, 16, 17, 18, and 19.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- The HPNS Team excavated approximately 444 cubic yards of soil from Work Area #36 and transferred the material to RSY4 for processing. Excavation activities were performed for the following trench segments:
 - 07-506-14-1C 12 linear feet completed
 - 07-E36-14-1C 32 linear feet completed
 - 07-E36-14-8S 2 linear feet completed
 - 07-E36-38-1Y 40 linear feet completed
 - 07-E36-38-1Z 6 linear feet completed
 - 07-E36-38-3E 72 linear feet completed
 - 07-E36-38-3H 30 linear feet completed
 - 07-E36-38-8B 2 linear feet completed
 - 07-E36-38-8C 4 linear feet completed
- A total of 192 linear feet of trench (including excavated soil, a manhole, and pipes) identified on the design drawings and 8 linear feet not identified on the design drawings was completed by the HPNS Team.
- Excavated Manhole MH1270 was placed on plastic pending further activities.
- Perimeter fencing along west edge of Work Area #36 was reconfigured by the HPNS Team to facilitate upcoming survey activities.
- A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: April 10, 2012	RAD EMAC – CTO 002
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Overview

The HPNS Team continued field activities in Work Areas #33 and #35. Details of the work activities performed are provided in the sections below.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

- The RSOR provided the HPNS Team with survey results for the pipe sections detailed in Survey Nos. HPS-PCPIPE-040612-049 and HPS-PCPIPE-040612-050. Because no activity above the release criteria was identified, these 32 pipe sections were released for transfer to the recycling stockpiles near Building 411.
- The HPNS Team issued drawings to identify locations for systematic sample collection in Trench Unit No. 247.
- The HPNS Team conducted storm water pollution prevention activities in Parcel C.
- A variety of housekeeping activities were performed throughout Parcel C by the HPNS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report



TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: April 10, 2012

RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

- The HPNS Team received a total of 44 truckloads of material at RSY3 for processing.
- The HPNS Team performed the following RSY4 processing activities:
 - ES Units 0658 and 0680 were prepared for upcoming towed array activities.
 - Issued drawings to identify biased, systematic, and remediation sample collection locations for ES Units 0626, 0652, 0655, 0659, 0674, and 0675.
 - A total of 6 biased and 18 systematic soil samples were collected from ES Unit 0659 and submitted to the on-site laboratory for analysis.
 - ES Unit 0656 was prepared for transfer to the stockpile area.
 - ES Unit 0654 was staged in the stockpile area pending receipt of the off-site analytical results.
- The HPNS Team continued radiological monitoring and control activities for the RSYs including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring, as appropriate.
- The off-site analytical data for ES Unit 0618 was submitted to the RASO for review. The RASO concurred with transferring the material to the DON non-LLRW contractor for off-site disposal at a CERCLA landfill.

Basewide Support

- Portal Monitor Activities
 - A total of 46 empty trucks entered HPNS through the portal monitor with no alarms.
 - A total of 46 truckloads of material exited HPNS through the portal monitor with no alarms.
- One outgoing materials and equipment survey was performed by the HPNS Team.

On-Site and Off-Site Laboratories

- On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:
 - Soil samples received for gamma spectroscopy analysis: 78
 - Swipe samples received for Protean counts: 9
 - Air samples received: 1
 - Samples analyzed by gamma spectroscopy: 85
 - Gamma spectroscopy samples recounted: 1
 - Protean swipe samples counted: 79
 - Protean air samples counted: 1
- A total of 92 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.
- A total of 114 samples were sent to TestAmerica St. Louis for analysis.



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: April 10, 2012

RMAC – CTO 07

Overview

The HPNS Team continued field activities for the Building 517 Site, Shacks 79 and 80, the 500 Series Area, and Work Area #36. Details of the activities performed are provided in the sections below.

Building 517 Site

- The HPNS Team performed Class 1 survey activities for Survey Unit 2. A total of 36 systematic gamma static measurements were logged with a maximum measurement of 8,515 cpm. In addition, 36 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.

Shacks 79 and 80

- The HPNS Team provided the RASO with on-site analytical and survey results for the biased and systematic samples collected from Class 1 Survey Unit 2. Characterization and remediation will be performed due to the presence of ^{137}Cs activity above the release criteria at Sample Point 7 (0.17 pCi/g).
- The HPNS Team issued drawings to identify characterization sample collection locations in Class 1 Survey Unit 2.

500 Series Area

- The HPNS Team provided the RASO with on-site analytical results for the characterization samples collected from Class 1 Survey Unit 17. Because no activity above the release criteria was identified, remediation and post-remediation sample collection will be performed.
- The HPNS Team issued drawings to identify remediation locations in Class 1 Survey Unit 17 and systematic sample collection locations in Class 1 Survey Units 3 and 18.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- The HPNS Team excavated approximately 528 cubic yards of soil from Work Area #36 and transferred the material to RSY3 for processing. Excavation activities were performed for the following trench segments:

- 07-E36-00-6X 15 linear feet completed
 - 07-E36-00-6Y 44 linear feet completed
 - 07-E36-00-6Z 50 linear feet completed
 - 07-E36-00-8Y 34 linear feet completed
 - 07-E36-00-8Z 24 linear feet completed
 - 07-E36-00-9K 5 linear feet completed
- A total of 109 linear feet of trench (including excavated soil, manholes, and pipes) identified on the design drawings and 63 linear feet not identified on the design drawings was completed by the HPNS Team.
 - Excavated Manholes MH1280 and MH1281 were placed on plastic pending further activities.
 - A sediment sample was collected from Manhole MH1281 (07-PEMH1281-012-01) by the HPNS Team and submitted to the on-site laboratory for analysis.
 - Crushed debris and Manhole MH1275 were placed in LLRW bin ERRU000161 for off-site disposal.
 - Backfill activities were initiated for Trench Unit Nos. 225 and 228 by the HPNS Team.
 - A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

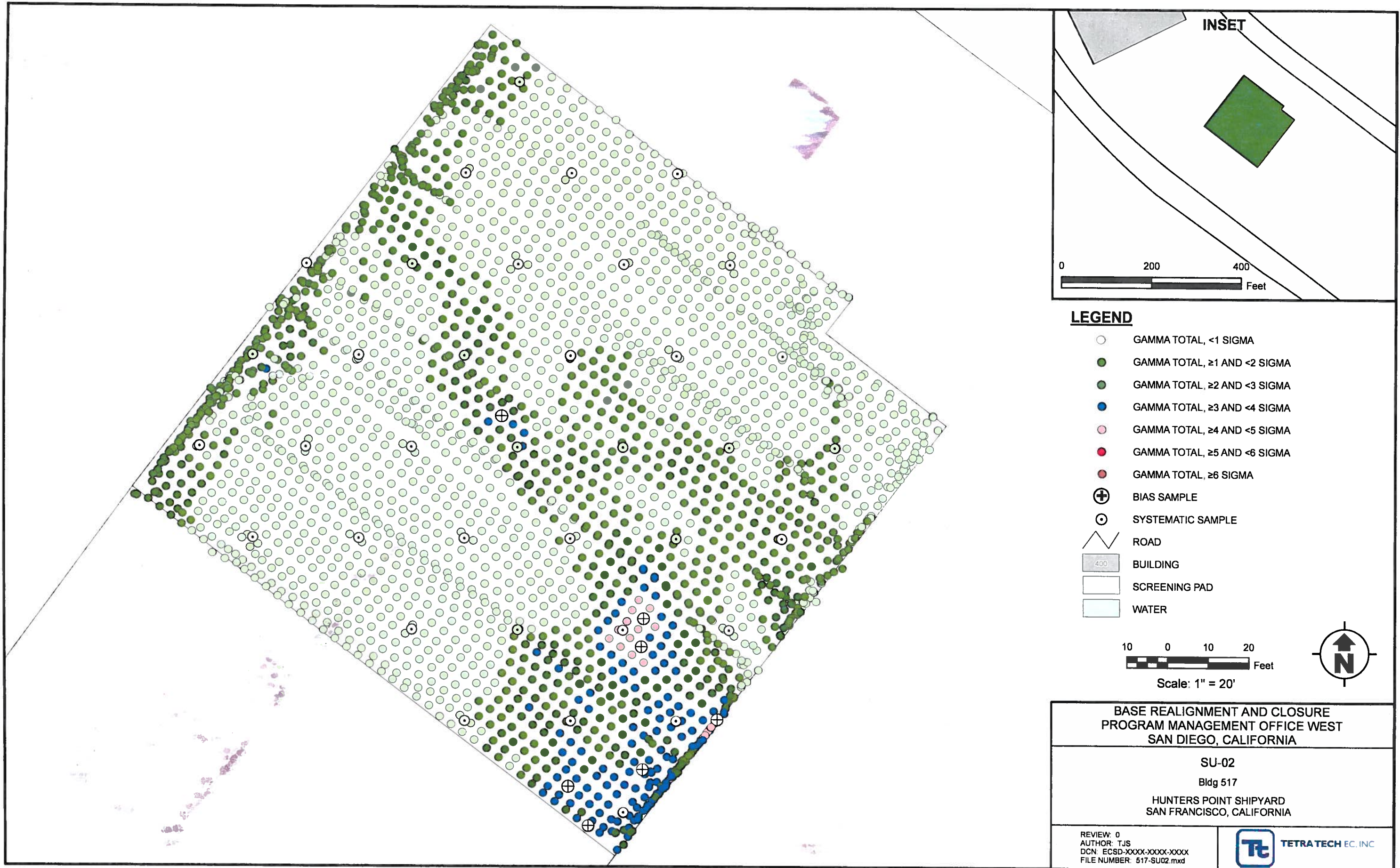
Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report

Area	Survey Unit	Sample Point	Sample Type	Sample ID	Date Collected
517	2	1	Biased	07517-S0002-F001-01	12-Dec-11
517	2	2	Biased	07517-S0002-F002-01	12-Dec-11
517	2	3	Biased	07517-S0002-F003-01	12-Dec-11
517	2	4	Biased	07517-S0002-F004-01	12-Dec-11
517	2	5	Biased	07517-S0002-F005-01	12-Dec-11
517	2	6	Biased	07517-S0002-F006-01	12-Dec-11
517	2	7	Biased	07517-S0002-F007-01	12-Dec-11
517	2	8	Systematic	07517-S0002-F008-01	12-Dec-11
517	2	9	Systematic	07517-S0002-F009-01	12-Dec-11
517	2	10	Systematic	07517-S0002-F010-01	12-Dec-11
517	2	11	Systematic	07517-S0002-F011-01	12-Dec-11
517	2	12	Systematic	07517-S0002-F012-01	12-Dec-11
517	2	13	Systematic	07517-S0002-F013-01	12-Dec-11
517	2	14	Systematic	07517-S0002-F014-01	12-Dec-11
517	2	15	Systematic	07517-S0002-F015-01	12-Dec-11
517	2	16	Systematic	07517-S0002-F016-01	12-Dec-11
517	2	17	Systematic	07517-S0002-F017-01	12-Dec-11
517	2	18	Systematic	07517-S0002-F018-01	12-Dec-11
517	2	19	Systematic	07517-S0002-F019-01	12-Dec-11
517	2	20	Systematic	07517-S0002-F020-01	12-Dec-11
517	2	21	Systematic	07517-S0002-F021-01	12-Dec-11
517	2	22	Systematic	07517-S0002-F022-01	12-Dec-11
517	2	23	Systematic	07517-S0002-F023-01	12-Dec-11
517	2	24	Systematic	07517-S0002-F024-01	12-Dec-11
517	2	25	Systematic	07517-S0002-F025-01	12-Dec-11
517	2	26	Systematic	07517-S0002-F026-01	12-Dec-11
517	2	27	Systematic	07517-S0002-F027-01	12-Dec-11
517	2	28	Systematic	07517-S0002-F028-01	12-Dec-11
517	2	29	Systematic	07517-S0002-F029-01	12-Dec-11
517	2	30	Systematic	07517-S0002-F030-01	12-Dec-11
517	2	31	Systematic	07517-S0002-F031-01	12-Dec-11
517	2	32	Systematic	07517-S0002-F032-01	12-Dec-11
517	2	33	Systematic	07517-S0002-F033-01	12-Dec-11
517	2	34	Systematic	07517-S0002-F034-01	12-Dec-11
517	2	35	Systematic	07517-S0002-F035-01	12-Dec-11
517	2	36	Systematic	07517-S0002-F036-01	12-Dec-11
517	2	37	Systematic	07517-S0002-F037-01	12-Dec-11
517	2	38	Systematic	07517-S0002-F038-01	12-Dec-11
517	2	39	Systematic	07517-S0002-F039-01	12-Dec-11
517	2	40	Systematic	07517-S0002-F040-01	12-Dec-11
517	2	41	Systematic	07517-S0002-F041-01	12-Dec-11
517	2	42	Systematic	07517-S0002-F042-01	12-Dec-11
517	2	43	Systematic	07517-S0002-F043-01	12-Dec-11
517	2	44	Characterization	07517-S0002-F044-01	12-Jan-12
517	2	45	Characterization	07517-S0002-F045-01	12-Jan-12
517	2	46	Characterization	07517-S0002-F046-01	12-Jan-12
517	2	47	Characterization	07517-S0002-F047-01	12-Jan-12
517	2	48	Characterization	07517-S0002-F048-01	12-Jan-12
517	2	49	Characterization	07517-S0002-F049-01	12-Jan-12
517	2	50	Characterization	07517-S0002-F050-01	12-Jan-12
517	2	51	Characterization	07517-S0002-F051-01	12-Jan-12
517	2	52	Characterization	07517-S0002-F052-01	12-Jan-12

K-40	Ra-226	Cs-137	Bi-214	Pb-214
14.57	1.793	-0.007908	0.9212	1.077
13.7	1.729	0.00425	1.062	1.071
13.38	1.838	-0.002816	1.084	1.148
17.01	0.3222	-0.002556	0.6817	0.7362
15.95	0.812	-0.008397	0.598	0.6132
17.79	0.873	0.001905	0.4365	0.6143
18.45	0.8882	-0.005043	0.4547	0.6017
17.03	1.035	-0.002108	0.7789	0.8703
17.42	0.9294	0	0.7386	0.855
18.23	0.7109	-0.01334	0.725	0.7229
11.44	0.5055	0.01442	0.5093	0.5747
12.87	0.6684	-0.01473	0.4262	0.5235
14.43	3.803	-0.01851	2.372	2.476
13.1	2.481	-0.008261	1.73	1.827
14.29	2.046	0.008713	1.223	1.353
14.2	1.701	0.005234	1.635	1.681
10.77	0.9704	-0.001129	0.3679	0.4878
10.61	0.3254	0.009511	0.2953	0.5098
8.391	0.3543	0.001006	0.3331	0.3603
12.85	0.9633	0.01818	0.5032	0.5961
11.3	0.6022	0.00649	0.2723	0.4389
12.79	0.5336	0.01837	0.4	0.4706
13.81	0.7092	0.003023	0.6197	0.6552
13.87	0.6536	0	0.6175	0.6384
13.06	0.7848	0.007467	0.4886	0.5995
14.2	0.8044	-0.00686	0.6267	0.6843
5.401	0.5599	0.0005004	0.2297	0.3371
14.96	0.803	0.001295	0.5735	0.6863
15.07	0.6499	0.007813	0.5731	0.7231
14.5	0.9282	-0.00711	0.6613	0.7377
13.39	0.4525	0.01404	0.6022	0.6795
13.94	0.6558	0	0.505	0.6031
15.14	0.6507	0.01023	0.6365	0.6129
14.28	0.8655	0.01559	0.4783	0.6695
13.46	0.8594	0.02176	0.4704	0.6135
15.13	1.224	0.017	0.6901	0.6915
10.93	0.5857	0.02068	0.2603	0.4721
11.2	1.008	0.009354	0.502	0.5702
14.1	0.2553	-0.0008586	0.4775	0.6164
17.67	1.151	0.01056	0.8249	0.8027
13.06	0.7284	0.01624	0.5635	0.6122
12.31	1.421	-0.006136	0.8049	1.147
17.19	0.6279	-0.00326	0.6542	0.6478
12.58	0.1509	-0.0005076	0.3232	0.4743
12.9	1.032	-0.005945	0.4594	0.3422
12.51	0.812	-0.001039	0.3153	0.3805
13.6	0.8205	0.002865	0.2352	0.415
13.38	0.4986	0.007744	0.4544	0.4378
12.22	0.4907	-0.001855	0.2837	0.4477
12.61	0.3725	0.002652	0.4365	0.3721
12.87	0.4867	0.006751	0.3444	0.3249
10	0.3728	0.006848	0.4545	0.356

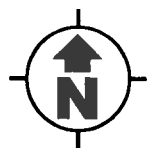
Off-Site Laboratory (pCi/g)				
K-40	Ra-226	Cs-137	Bi-214	Pb-214



LEGEND

- GAMMA TOTAL, <1 SIGMA
- GAMMA TOTAL, ≥1 AND <2 SIGMA
- GAMMA TOTAL, ≥2 AND <3 SIGMA
- GAMMA TOTAL, ≥3 AND <4 SIGMA
- GAMMA TOTAL, ≥4 AND <5 SIGMA
- GAMMA TOTAL, ≥5 AND <6 SIGMA
- GAMMA TOTAL, ≥6 SIGMA
- ⊕ BIAS SAMPLE
- ⊙ SYSTEMATIC SAMPLE
- ROAD
- 400' BUILDING
- SCREENING PAD
- WATER

10 0 10 20
Feet
Scale: 1" = 20'



BASE REALIGNMENT AND CLOSURE
PROGRAM MANAGEMENT OFFICE WEST
SAN DIEGO, CALIFORNIA

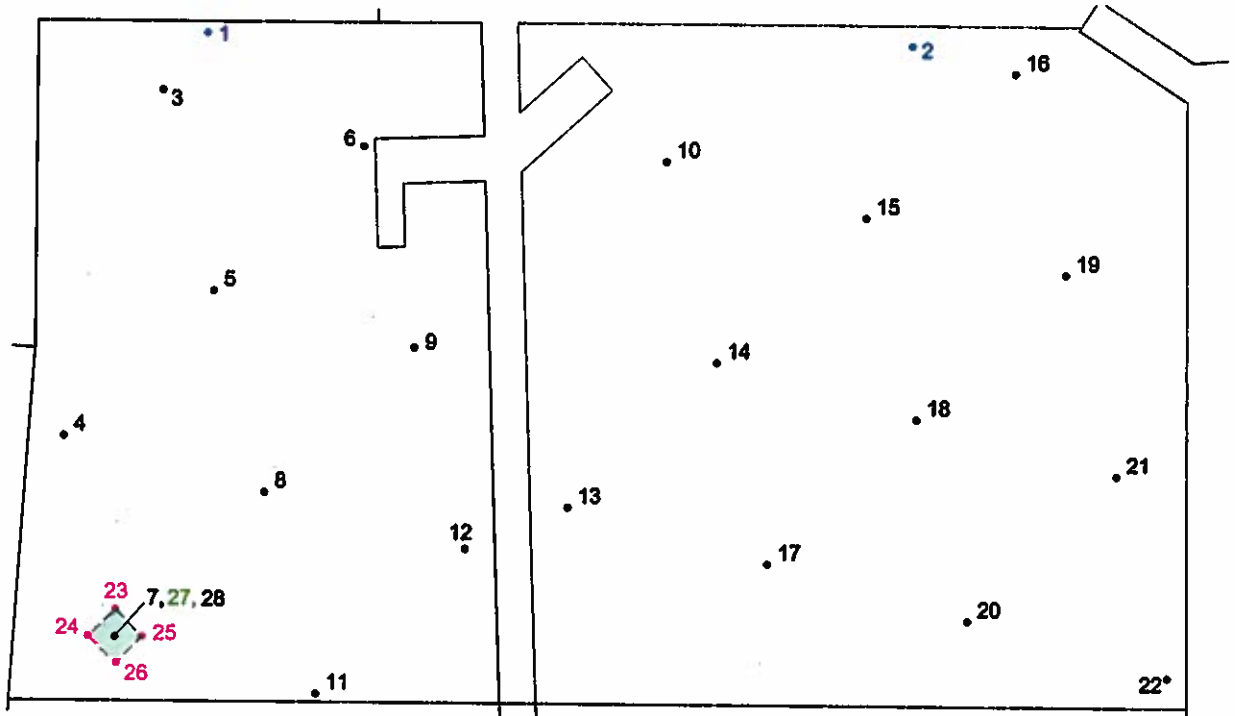
SU-02
Bldg 517

HUNTERS POINT SHIPYARD
SAN FRANCISCO, CALIFORNIA

REVIEW: 0
AUTHOR: TJS
DCN: ECSD-XXXX-XXXX-XXXX
FILE NUMBER: 517-SU02.mxd



P:\CTO-07 CAD FILES (RAD EMAC)\DWG FILES\SHACK 79 AND 80\SHACK 79-80.DWG
PLOT/UPDATE: APR 24 2012 08:32:18



SU-02
CLASS 1
844.72 m² (9092.45 ft²)

LEGEND:

- 1 BIASED 1-2
- 3 SYSTEMATIC 3-22,28
- 23 CHARACTERIZATION 23-26
- 27 POST-REMEDIATION 27



REMEDIATION AREA

SCALE 1:20

18

SAMPLE POINT NUMBER/LOCATION

SURVEY UNIT

RECORD COPY

HUNTERS POINT SHIPYARD
SAN FRANCISCO, CA
P.O. BOX 884836
SAN FRANCISCO, CA 94188

SHACKS 79/80
SURVEY UNIT 02



TETRA TECH EC, INC
1230 COLUMBIA STREET, SUITE 750
SAN DIEGO, CA 92101
TEL: (619) 234-8690 FAX: (619) 234-8591



TETRATECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 7980 Survey Unit: 2 Class: 1 Area: 844.72 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
1	4/4/2012 12:59	6475	5845	630	622-BKGDS1A	7004	
2	4/4/2012 13:00	6256	5845	411	622-BKGDS1A	7004	
3	4/4/2012 13:02	6656	5845	811	622-BKGDS1A	7004	
4	4/4/2012 13:03	6184	5845	339	622-BKGDS1A	7004	
5	4/4/2012 13:04	5730	5845	-115	622-BKGDS1A	7004	
6	4/4/2012 13:06	3559	5845	-2286	622-BKGDS1A	7004	
7	4/4/2012 13:07	4525	5845	-1320	622-BKGDS1A	7004	
8	4/4/2012 13:08	4128	5845	-1717	622-BKGDS1A	7004	
9	4/4/2012 13:09	4473	5845	-1372	622-BKGDS1A	7004	
10	4/4/2012 13:11	5532	5845	-313	622-BKGDS1A	7004	
11	4/4/2012 13:13	4710	5845	-1135	622-BKGDS1A	7004	
12	4/4/2012 13:14	3764	5845	-2081	622-BKGDS1A	7004	
13	4/4/2012 13:16	3549	5845	-2296	622-BKGDS1A	7004	
14	4/4/2012 13:17	3521	5845	-2324	622-BKGDS1A	7004	
15	4/4/2012 13:18	6110	5845	265	622-BKGDS1A	7004	
16	4/4/2012 13:20	5467	5845	-378	622-BKGDS1A	7004	
17	4/4/2012 13:21	3284	5845	-2561	622-BKGDS1A	7004	
18	4/4/2012 13:22	4884	5845	-961	622-BKGDS1A	7004	
19	4/4/2012 13:23	4780	5845	-1065	622-BKGDS1A	7004	
20	4/4/2012 13:25	5928	5845	83	622-BKGDS1A	7004	
21	4/4/2012 13:26	4987	5845	-858	622-BKGDS1A	7004	
22	4/4/2012 13:27	3724	5845	-2121	622-BKGDS1A	7004	
23	4/11/2012 8:30	3838	5845	-2007	622-BKGDS1A	7004	
24	4/11/2012 8:31	3481	5845	-2364	622-BKGDS1A	7004	
25	4/11/2012 8:32	3978	5845	-1867	622-BKGDS1A	7004	
26	4/11/2012 8:33	5325	5845	-520	622-BKGDS1A	7004	
27	4/18/2012 14:51	6330	5845	485	622-BKGDS1A	7004	
28	4/25/2012 10:08	6210	5845	365	622-BKGDS1A	7004	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Direct Measurement Report

Site Area: 7980 Survey Unit: 2 Class: 1 Area: 844.72 m² Count Time: 1 min

Radioisotopes of Concern (ROCs): Cs137 Ra226 Sr90

Rdg #	Date / Time	Gross Gamma CPM	Gamma Background CPM	Net Gamma CPM	Background ID*	3σ Investigation Level (cpm)	Comments
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Net Gamma cpm Min: -2561

Summary Avg: -938

Max: 811

St Dev: 1101

Readings > 3σ investigation level are highlighted in blue

* Background ID correlates to Instrument reference area background identification number

Gamma measurements > 3σ investigation level are verified by 2360 beta measurements



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Gamma Instrument and Reference Area Background Report

Site Area: 7980 Survey Unit: 2 Class: 1 Area: 844.72 m²

Radioisotopes of Concern (ROCs): Cs137 Ra226 Sr90

2350 Identification #: 622

Instrument/Probe Type: 2350-1 / 44-10

Instrument Serial #: 129430

Probe Serial #: 230163

Calibration Due Date: 10/2/2012

Reference Area Background Identification #: 622-BKGDS1A Count Time (minutes): 1.00

Rdg #	Date and Time	Gross Gamma CPM
1	10/13/2011 15:12	5811
2	10/13/2011 15:13	5788
3	10/13/2011 15:14	5839
4	10/13/2011 15:15	5848
5	10/13/2011 15:16	5775
6	10/13/2011 15:17	5780
7	10/13/2011 15:18	5977
8	10/13/2011 15:20	5831
9	10/13/2011 15:21	5998
10	10/13/2011 15:22	5240
11	10/13/2011 15:23	5892
12	10/13/2011 15:24	5899
13	10/13/2011 15:25	5001
14	10/13/2011 15:27	5852
15	10/13/2011 15:28	5894
16	10/13/2011 15:29	5075
17	10/13/2011 15:31	6115
18	10/13/2011 15:32	6400
19	10/13/2011 15:33	6490
20	10/13/2011 15:35	6396

Gamma Mean Background (cpm): 5845

Standard Deviation: 386

Gamma 3 σ Investigation
Level (cpm): 7004



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Exposure Rate Measurements

Page 1

Site Area: 7980 Survey Unit: 2 Class: 1 Area: 844.72 m²

Radioisotopes of Concern (ROCs): Cs137 Ra226 Sr90

Instrument Model:	Model 19	Reference Area Background Identification #:	666-BKGDS1
Instrument Serial Number:	91499	Reference Area Background Location:	Parcel D-1 Reference
Instrument Calibration Due Date:	1/15/2013	Exposure Rate Background (μR/hr):	6

Rdg #	Date	Exposure Rate (μR/hr)	Comments
1	4/4/2012	7	
2	4/4/2012	7	
3	4/4/2012	7	
4	4/4/2012	7	
5	4/4/2012	6	
6	4/4/2012	6	
7	4/4/2012	6	
8	4/4/2012	6	
9	4/4/2012	6	
10	4/4/2012	7	
11	4/4/2012	5	
12	4/4/2012	5	
13	4/4/2012	6	
14	4/4/2012	6	
15	4/4/2012	7	
16	4/4/2012	8	
17	4/4/2012	6	
18	4/4/2012	6	
19	4/4/2012	7	
20	4/4/2012	4	
21	4/4/2012	6	
22	4/4/2012	6	
23	4/11/2012	5	
24	4/11/2012	6	
25	4/11/2012	6	
26	4/11/2012	7	
27	4/18/2012	7	



TETRA TECH EC, INC.
Hunters Point Shipyard
San Francisco, CA

Exposure Rate Measurements

Page 2

Rdg #	Date	Exposure Rate (μ R/hr)	Comments
-------	------	--------------------------------	----------

28	4/25/2012	7	
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Exposure Rate	Min: 4.00
Summary (μR/hr)	Avg: 6.25
	Max: 8.00
	St Dev: 0.84



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02378

Project Name Radiological Building Survey		PO Number N/A		G A S A L P H A M R 9 0 M A S P E C		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section	
Project Location HUNTERS POINT		Project Number 4044-0007				LABORATORY ID			
Sampler Name J. Rolfe		Airbill Number N/A							
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592							
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	COMMENTS	LOCATION	SAMPLE ID
077980-S0002-F027-01	4/18/2012	1245	1		S1				

Relinquished by: (signature) J. Rolfe	Date 4-18-12	Received by: (signature) J. Rolfe	LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS SHACKS 7A 80 SITE BFS 50-2 POST-CONCRETE 4-27	
Company KRS	Time 1540	Company KRS	COMPOSITE DESCRIPTION			
Relinquished by: (signature)	Date	Received by: (signature)	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)			
Company	Time	Company	TEMPERATURE. SAMPLE CONDITION. COOLER SEAL.			
Relinquished by: (signature)	Date	Received by: (signature)				
Company	Time	Company				



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02351

Project Name Radiological Building Survey		PO Number N/A		A L P H A		Project Information Section	
Project Location HUNTERS POINT		Project Number 4044-0007		M 9 0		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.	
Sampler Name J. Rofe		Airbill Number N/A		A S P E C		LABORATORY ID	
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-750-7592		T A T		LOCATION	
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	COMMENTS	SAMPLE ID
077980-S0002-F001-01	4/4/2012	1235	1		S1		
077980-S0002-F002-01	4/4/2012	1238	1		S1		
077980-S0002-F003-01	4/4/2012	1241	1		S1		
077980-S0002-F004-01	4/4/2012	1244	1		S1		
077980-S0002-F005-01	4/4/2012	1247	1		S1		
077980-S0002-F006-01	4/4/2012	1250	1		S1		
077980-S0002-F007-01	4/4/2012	1253	1		S1		
077980-S0002-F008-01	4/4/2012	1256	1		S1	DUP	
077980-S0002-F009-01	4/4/2012	1259	1		S1		
077980-S0002-F010-01	4/4/2012	1302	1		S1		
077980-S0002-F011-01	4/4/2012	1305	1		S1		
077980-S0002-F012-01	4/4/2012	1308	1		S1		

Relinquished by: <i>J. Rofe</i>		Received by: (signature) <i>[Signature]</i>	
Company	RSRS	Company	CT
Relinquished by: (signature)	Date	Relinquished by: (signature)	Date
Company	Time	Company	Time
Relinquished by: (signature)	Date	Relinquished by: (signature)	Date
Company	Time	Company	Time

SAMPLING COMMENTS
SHACKS 79/80 SITE P3
SW-2
BIASED 1-2
SYSTEMATIC 3-22

COMPOSITE DESCRIPTION
SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)
TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02352

Project Name Radiological Building Survey		PO Number N/A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section			
Project Location HUNTERS POINT		Project Number 4044-0007		LABORATORY ID					
Sampler Name J. Rolfe		Airbill Number N/A							
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-758-7592							
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	COMMENTS	LOCATION	SAMPLE ID
077980-S0002-F013-01	4/4/2012	1311	1		S1	<input checked="" type="checkbox"/>			
077980-S0002-F014-01	4/4/2012	1314	1		S1	<input checked="" type="checkbox"/>			
077980-S0002-F015-01	4/4/2012	1317	1		S1	<input checked="" type="checkbox"/>			
077980-S0002-F016-01	4/4/2012	1320	1		S1	<input checked="" type="checkbox"/>			
077980-S0002-F017-01	4/4/2012	1323	1		S1	<input checked="" type="checkbox"/>			
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077980-S0002-F021-01	4/4/2012	1335	1		S1	<input checked="" type="checkbox"/>			
077980-S0002-F022-01	4/4/2012	1338	1		S1	<input checked="" type="checkbox"/>			

Relinquished by: (signature) J. Rolfe		Date 4-4-12		Received by: (signature) [Signature]	
Company RSPS		Time 1523		Company [Signature]	
Relinquished by: (signature)		Date		Received by: (signature)	
Company		Time		Company	
Relinquished by: (signature)		Date		Received by: (signature)	
Company		Time		Company	

LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS	
COMPOSITE DESCRIPTION		SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)	
TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:			



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

BFS 02361

Project Name Radiological Building Survey		PO Number N/A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section			
Project Location HUNTERS POINT		Project Number 4044-0007		LABORATORY ID					
Sampler Name J. Rolfe		Airbill Number N/A							
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592							
SAMPLE ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	COMMENTS	LOCATION	SAMPLE ID
077980-S0002-F023-01	4/11/2012	0830	1		S1	<input checked="" type="checkbox"/>			
077980-S0002-F024-01	4/11/2012	0835	1		S1	<input checked="" type="checkbox"/>			
077980-S0002-F025-01	4/11/2012	0840	1		S1	<input checked="" type="checkbox"/>			
077980-S0002-F026-01	4/11/2012	0845	1		S1	<input checked="" type="checkbox"/>			

Relinquished by: (signature) J. Rolfe		Date 4-11-12		Received by: (signature) [Signature]	
Company RSRS		Time 1612		Company CT	
Relinquished by: (signature)		Date		Received by: (signature)	
Company		Time		Company	
Relinquished by: (signature)		Date		Received by: (signature)	
Company		Time		Company	

LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS SITES 77 & 88 SITE SD-2 CHANGING DIRECTIONS 23-26	
COMPOSITE DESCRIPTION			
SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY) TEMPERATURE, SAMPLE CONDITION, COOLER SEAL,			



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

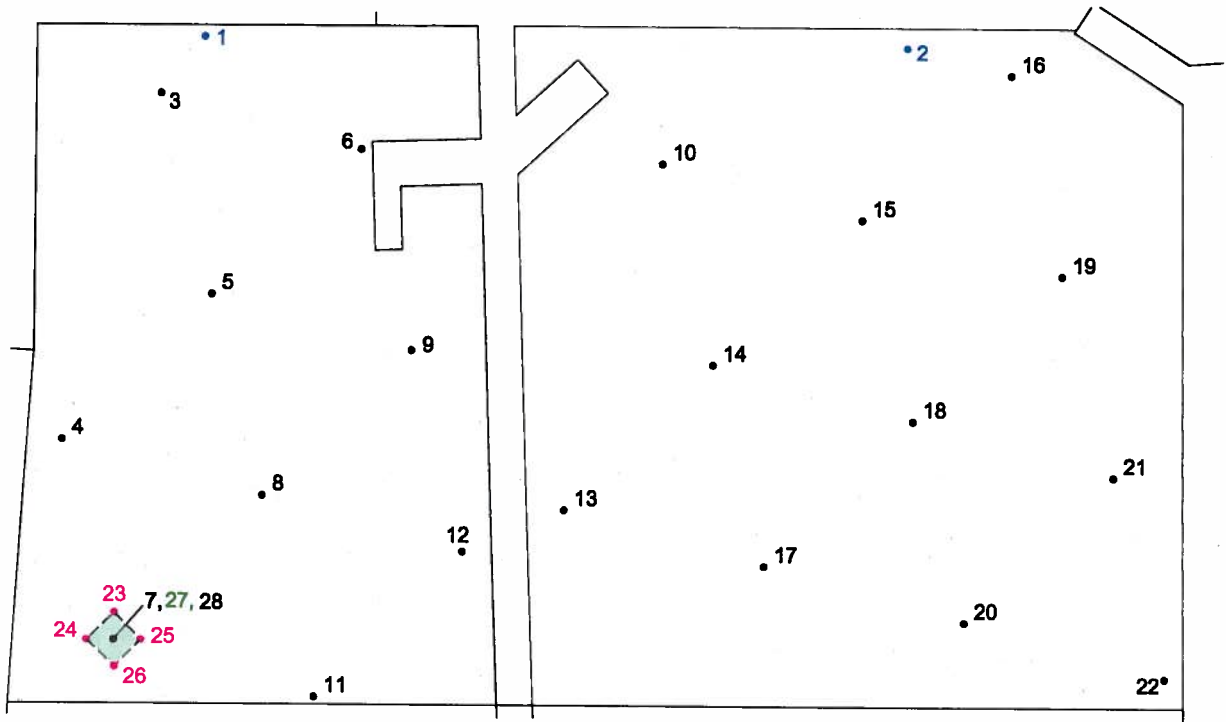
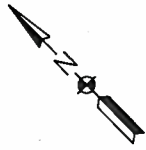
BFS 02387

Page 1 of 1

Project Name Radiological Building Survey	PO Number N/A	G A L S R P A M M A S P E C		LABORATORY NAME ONSITE - Curtis & Templings, LTD.		Project Information Section		
Project Location HUNTERS POINT	Project Number 4044-0007			LABORATORY ID				
Sampler Name R. Zehensky	Airbill Number N/A							
Project Chemist LISA BIENKOWSKI	Project Chemist Phone 949-756-7592							
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	COMMENTS	LOCATION	SAMPLE ID
077980-S0002-F028-01	4/25/2012	1045	1		S1			

Relinquished by: (signature) R. Zehensky	Date 4.25.12	Received by: (signature) [Signature]	LABORATORY INSTRUCTIONS/COMMENTS	SAMPLING COMMENTS SHAW 7/8/80 SITE F55 DU-2 SYSTEMATIC # 28
Company R&RS	Time 1522Z	Company CJ		
Relinquished by: (signature)	Date	Received by: (signature)	COMPOSITE DESCRIPTION	
Company	Time	Company		
Relinquished by: (signature)	Date	Received by: (signature)	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY)	
Company	Time	Company	TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:	

P:\CTO-07 CAD FILES (RAD EMAC)\DWG FILES\SHACK 79 AND 80\SHACK 79-80.DWG
 PLOT/UPDATE: APR 24 2012 08:32:18



SU-02
 CLASS 1
 844.72 m² (9092.45 ft²)

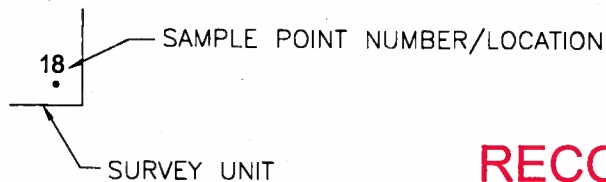
LEGEND:

- 1 BIASED 1-2
- 3 SYSTEMATIC 3-22,28
- 23 CHARACTERIZATION 23-26
- 27 POST-REMEDIATION 27



REMEDIAION AREA

SCALE 1:20



RECORD COPY

HUNTERS POINT SHIPYARD
SAN FRANCISCO, CA
 P.O. BOX 884836
 SAN FRANCISCO, CA 94188

SHACKS 79/80
SURVEY UNIT 02



TETRA TECH EC, INC
 1230 COLUMBIA STREET, SUITE 750
 SAN DIEGO, CA 92101
 TEL: (619) 234-8690 FAX: (619) 234-8591

Chiu, George

From: Chiu, George
Sent: Tuesday, June 05, 2012 1:40 PM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Rolfe, Stephen; Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - Former Shack 79 and 80 Sites Survey Unit 02
Attachments: 077980-S0002 003 to 006, 008 to 022, and 028 Off-Site Gamma.pdf; 077980-S0002 003 to 006, 008 to 022, and 028 Sr.pdf

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the off-site gamma spec and strontium results for the systematic samples from Former Shack 79 and 80 Sites Survey Unit 02.

George Chiu | Health Physicist
Office: 415.216.2745 | Cell: 714.270.4009
george.chiu@tetrattech.com

Radiological Survey & Remedial Services
100 Washington Street Suite 200 | Reno, NV 89503
www.radvcs.com

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Think Green - Not every email needs to be printed.

From: Chiu, George
Sent: Friday, May 04, 2012 1:15 PM
To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)
Cc: Rolfe, Stephen; Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan
Subject: HPS Data - Former Shack 79 and 80 Sites Survey Unit 02

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the replacement systematic sampling results from Former Shack 79 and 80 Sites Survey Unit 02.

According to the TSP for the Former Shack 79 and 80 Sites, 100% of the final systematic will be analyzed by gamma spectroscopy and for total strontium/strontium-90 at a DoD ELAP approved laboratory.

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From: Chiu, George

Sent: Wednesday, May 02, 2012 12:00 PM

To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)

Cc: Rolfe, Stephen; Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan

Subject: HPS Data - Former Shack 79 and 80 Sites Survey Unit 02

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review is the total strontium result for the sample (07) with cesium-137 activity above the release criterion from Former Shack 79 and 80 Sites Survey Unit 02.

George Chiu | Health Physicist
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From: Chiu, George

Sent: Monday, April 23, 2012 1:18 PM

To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)

Cc: Rolfe, Stephen; Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan

Subject: HPS Data - Former Shack 79 and 80 Sites Survey Unit 02

Allen/Joe/Laurie/Matt/Pat/Zach:

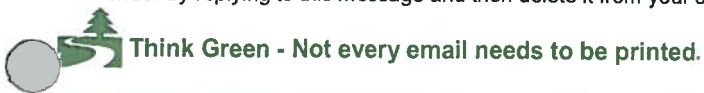
Attached for your review are the post-remediation sampling results from Former Shack 79 and 80 Sites Survey Unit 02. Sample 27 was recounted for a longer duration at the direction of the laboratory manager.

We will proceed with taking a replacement systematic sample for sample 07.

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george.chiu@tetrattech.com

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From: Chiu, George

Sent: Tuesday, April 17, 2012 9:49 AM

To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)

Cc: Rolfe, Stephen; Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan

Subject: HPS Data - Former Shack 79 and 80 Sites Survey Unit 02

Allen/Joe/Laurie/Matt/Pat/Zach:

Attached for your review are the characterization sampling results from Former Shack 79 and 80 Sites Survey Unit 02.

We will proceed with remediation followed by post-remediation sampling.

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george.chiu@tetrattech.com

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www.radsvcs.com

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From: Chiu, George

Sent: Tuesday, April 10, 2012 7:59 AM

To: Allen Stambaugh (allen.stambaugh@navy.mil); joseph.sevcik@navy.mil; Laurie Lowman (laurie.lowman@navy.mil); Matt Slack (matthew.slack@navy.mil); Patrick Owens (patrick.a.owens@navy.mil); Zachary Edwards (zachary.edwards@navy.mil)

Cc: Rolfe, Stephen; Abkemeier, Erik; Berry, Adam; Bray, Jeff; Dambach, Brooklyn; DeLong, Daryl; Dougherty, Christine; Fluty, Robin; Henderson, Brian; Hubbard, Justin; Jensen, Jarvis; Kanaya, Rich; Miller, Karisa; Miller, Thorpe; Montgomery, Shanti; Smith, Phil; Snyder, Marie; Spencer, Jenny; Taylor, Jane; Wall, Paul; Weingarz, Richard; White, Bryan

Subject: HPS Data - Former Shack 79 and 80 Sites Survey Unit 02

Allen/Laurie/Matt/Pat/Zach:

Attached for your review are the on-site bias and systematic sampling results from Former Shack 79 and 80 Sites Survey Unit 02. Samples 01, 03, 06, 07, 09, and 22 were recounted for a longer duration at the direction of the laboratory manager. Also attached are the gamma scans, statics, and exposure rate measurements.

We will proceed with characterization/remediation around sample point 07 (0.1700 pCi/g) due to cesium-137 activity.

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george.chiu@tetrattech.com

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www.radsvcs.com

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TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: April 4, 2012	RAD EMAC – CTO 002
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Overview

The HPNS Team continued field activities for the North Pier and Work Area #32. Details of the work activities performed are provided in the sections below.

North Pier

- Approximately 114 cubic yards of asphalt removed from Survey Unit 6 was transferred by the HPNS Team to the Building 411 recycling stockpiles.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

- A variety of housekeeping activities were performed throughout Parcel C by the HPNS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report



TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: April 4, 2012

RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

- The HPNS Team performed the following RSY4 processing activities:
 - A total of 53 truckloads of material were received for processing.
 - Towed array survey activities were performed for ES Unit 0673.
 - Issued drawing to identify biased sample collection locations for ES Unit 0671.
 - Two biased soil samples were collected from ES Unit 0626 and submitted to the on-site laboratory for analysis.
- The ES Unit 0656 on-site analytical data was submitted to the RASO for review with a request for concurrence to stage the material pending receipt of the off-site analytical results.

Basewide Support

- Portal Monitor Activities
 - A total of 70 empty trucks entered HPNS through the portal monitor with no alarms.
 - A total of 70 truckloads of material exited HPNS through the portal monitor with no alarms.

On-Site and Off-Site Laboratories

- On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:
 - Soil samples received for gamma spectroscopy analysis: 58
 - Air samples received: 10
 - Samples analyzed by gamma spectroscopy: 79
 - Gamma spectroscopy samples recounted: 14
 - Protean air samples counted: 10
- A total of 120 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: April 4, 2012

RMAC – CTO 07

Overview

The HPNS Team continued field activities for the Building 506 Site, Shacks 79 and 80, the 500 Series Area, and Work Area #36. Details of the activities performed are provided in the sections below.

Building 506 Site

- The HPNS Team provided the RASO with off-site analytical results for the systematic samples collected from Class 1 Survey Unit 5; no activity above the release criteria was identified.

Shacks 79 and 80

- Towed array gamma scan survey activities were performed by the HPNS Team over Survey Unit 3.
- The HPNS Team performed Class 1 survey activities for Survey Unit 2. A total of 2 biased and 20 systematic gamma static measurements were logged with a maximum measurement of 6,655 cpm. In addition, 22 soil samples were collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPNS Team issued drawings to identify locations for biased and systematic sample collection in Class 1 Survey Unit 2.

500 Series Area

- The HPNS Team continued soil grading and debris removal in preparation for upcoming towed array surveys in Class 2 Survey Units 22 and 23.
- Approximately 46 cubic yards of soil was remediated from Survey Units 16 and 18 by the HPNS Team and placed in LLRW bins AWIU000148, AWIU000162, AWIU000286, and AWIU000296 for off-site disposal.
- The HPNS Team performed Class 1 survey activities as follows:
 - Survey Unit 3 – A total of 10 post-remediation gamma static measurements were logged with a maximum measurement of 6,878 cpm. In addition, 10 soil samples were collected and submitted to the on-site laboratory for analysis.

- Survey Unit 18 – A total of three post-remediation gamma static measurements were logged with a maximum measurement of 6,621 cpm. In addition, three soil samples were collected and submitted to the on-site laboratory for analysis.
- The RSO is in the process of reviewing the survey data for Survey Units 3 and 18.
- The HPNS Team provided the RASO with on-site analytical and survey results for the systematic samples collected from Class I Survey Unit 15. Characterization and remediation will be performed due to the presence of ^{137}Cs contamination as follows:
 - Sample Point 54 (07500SA-S0015-F054-01) with ^{137}Cs at 0.1554 pCi/g
 - Sample Point 58 (07500SA-S0015-F058-01) with ^{137}Cs at 0.2167 pCi/g
 - Sample Point 64 (07500SA-S0015-F064-01) with ^{137}Cs at 0.1307 pCi/g
 - Sample Point 68 (07500SA-S0015-F068-01) with ^{137}Cs at 0.5159 pCi/g
 - Sample Point 80 (07500SA-S0015-F080-01) with ^{137}Cs at 0.2028 pCi/g
 - Sample Point 82 (07500SA-S0015-F082-01) with ^{137}Cs at 0.1932 pCi/g
 - Sample Point 83 (07500SA-S0015-F083-01) with ^{137}Cs at 0.1937 pCi/g
 - Sample Point 85 (07500SA-S0015-F085-01) with ^{137}Cs at 0.234 pCi/g

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- The HPNS Team excavated approximately 636 cubic yards of soil from Work Area #36 and transferred the material to RSY4 for processing. Excavation activities were performed for the following trench segments:
 - 07-E36-38-3F 5 linear feet completed
 - 07-E36-38-3G 5 linear feet completed
 - 07-E36-38-3H 90 linear feet completed
 - 07-E36-38-3I 24 linear feet completed
 - 07-E36-38-3J 26 linear feet completed
 - 07-E36-38-3P 5 linear feet completed
 - 07-E36-38-3Q 25 linear feet completed
 - 07-E36-38-3R 60 linear feet completed
- A total of 240 linear feet of trench (including excavated soil, manholes, and pipes) identified on the design drawings was completed by the HPNS Team.
- Manholes MH1275 and MH1276 and pipes excavated from trench segment 07-E36-38-3I were placed on plastic pending further activities.
- A total of two sediment samples were collected from excavated Manholes MH1275 (07-PEMH1275-009-01) and MH1276 (07-PEMH1276-010-01) by the HPNS Team and submitted to the on-site laboratory for analysis.
- A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: April 11, 2012	RAD EMAC – CTO 002
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Overview

The HPNS Team continued field activities for Buildings 203, 211, 231, and 253, and Work Areas #33, #34, and #35. Details of the work activities performed are provided in the sections below.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

- Radiologically surveyed and released excavated pipe sections (Survey No. HPS-PCPIPE-040612-049 and HPS-PCPIPE-040612-050) were transferred to stockpiles near Building 411 pending off-site disposal or recycling.
- A total of 18 systematic samples were collected from Trench Unit No. 247 (associated with Building 203) by the HPNS Team and submitted to the on-site laboratory for analysis.
- The HPNS Team provided the RASO with analytical results for the post-remediation samples collected from Trench Unit No. 242. Because no activity above the release criteria was identified, systematic sample collection activities will be performed.
- The HPNS Team issued drawings to identify locations for systematic sample collection in Trench Unit No. 238 (associated with Buildings 211, 231, and 253).
- The HPNS Team conducted storm water pollution prevention activities in Parcel C.
- A variety of housekeeping activities were performed throughout Parcel C by the HPNS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report



TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: April 11, 2012

RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

- The HPNS Team received a total of 62 truckloads of material at RSY3 for processing.
- The HPNS Team performed the following RSY4 processing activities:
 - Collected soil samples and submitted to the on-site laboratory for analysis as follows:
 - 18 systematic soil samples from ES Unit 0626
 - 9 biased and 18 systematic soil samples from ES Unit 0652
 - 16 biased and 18 systematic soil samples from ES Unit 0655
 - 4 biased and 18 systematic soil samples from ES Unit 0674
 - 7 biased and 18 systematic soil samples from ES Unit 0675
 - Remediated approximately 31 cubic yards of soil from ES Unit 0626 and placed the material in LLRW bins pending off-site disposal by the DON radiological waste contractor.
 - ES Unit 0656 was staged in the stockpile area pending receipt of the off-site analytical results.
- The HPNS Team continued radiological monitoring and control activities for the RSYs including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring, as appropriate.
- The HPNS Team provided the RASO with the following:
 - On-site analytical data for ES Units 0673 and 0677 along with requests for concurrence to stage the materials pending receipt of the off-site analytical results prior to transferring to the DON non-LLRW contractor for off-site disposal at a CERCLA landfill.
 - On-site analytical data for ES Unit 0657 and a request for concurrence to stage the materials pending receipt of the off-site analytical results.

Basewide Support

- Portal Monitor Activities
 - A total of 48 empty trucks entered HPNS through the portal monitor with no alarms.
 - A total of 48 truckloads of material exited HPNS through the portal monitor with no alarms.

On-Site and Off-Site Laboratories

- On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:
 - Soil samples received for gamma spectroscopy analysis: 172
 - Air samples received: 9
 - Samples analyzed by gamma spectroscopy: 76
 - Gamma spectroscopy samples recounted: 5
 - Protean air samples counted: 10
- A total of 194 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: April 11, 2012

RMAC – CTO 07

Overview

The HPNS Team continued field activities for Shacks 79 and 80, the 500 Series Area, and Work Area #36. Details of the activities performed are provided in the sections below.

Shacks 79 and 80

- The HPNS Team performed Class 1 survey activities as follows:
 - Survey Unit 2 – A total of four characterization gamma static measurements were logged with a maximum measurement of 5,325 cpm. In addition, four soil samples were collected and submitted to the on-site laboratory for analysis.
 - Survey Unit 3 – A total of two biased and twenty systematic gamma static measurements were logged with a maximum measurement of 5,745 cpm. In addition, 22 soil samples were collected and submitted to the on-site laboratory for analysis.
- The RSO is in the process of reviewing the survey data for Survey Units 2 and 3.
- The HPNS Team issued drawings to identify locations for biased and systematic sample collection in Class 1 Survey Unit 3.

500 Series Area

- The HPNS Team performed Class 1 survey activities for Survey Unit 3. A total of 36 systematic gamma static measurements were logged with a maximum measurement of 7,895 cpm.
- The HPNS Team provided the RASO with analytical results for the post-remediation samples collected from Class 1 Survey Unit 16. Because no activity above the release criteria was identified, systematic sample collection activities will be performed.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- The HPNS Team excavated approximately 744 cubic yards of soil from Work Area #36 and transferred the material to RSY3 for processing. Excavation activities were performed for the following trench segments:
 - 07-E36-00-6R 100 linear feet completed

- 07-E36-00-6S 30 linear feet completed
 - 07-E36-00-6U 66 linear feet completed
 - 07-E36-00-6V 10 linear feet completed
 - 07-E36-00-6W 21 linear feet completed
 - 07-E36-00-6X 25 linear feet completed
- A total of 252 linear feet of trench (including excavated soil, a manhole, and pipes) identified on the design drawings was completed by the HPNS Team.
 - Excavated Manhole MH1282 was placed on plastic pending further activities.
 - Backfill activities were completed for Trench Unit No. 225 by the HPNS Team.
 - Backfill activities were continued for Trench Unit No. 228 by the HPNS Team.
 - The HPNS Team provided the RASO with the on-site analytical results for the systematic samples collected from Trench Unit No. 245; no activity above the release criteria was identified.
 - The HPNS Team conducted storm water pollution prevention activities in Parcel E.
 - A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: April 18, 2012

RAD EMAC – CTO 002

Overview

The HPNS Team continued field activities for the North Pier and Work Areas #32, #33, and 34. Details of the work activities performed are provided in the sections below.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

- The HPNS Team excavated approximately 216 cubic yards of soil from Work Areas #32 and #34 and transferred the material to RSY4 for processing. Excavation activities were performed for the following trench segments:
 - 02-C32-00-1G 35 linear feet completed
 - 02-C34-28-4T 20 linear feet completed
 - 02-C34-28-4Y 38 linear feet completed
 - 02-C34-28-5Y 20 linear feet completed
- A total of 113 linear feet of trench (including excavated soil and pipes) identified on the design drawings was completed by the HPNS Team.
- Pipe sections excavated from trench segments 02-C32-00-1G and 02-C34-28-4Y were placed on plastic pending further activities.
- A sediment sample was collected from pipe excavated from trench segment 02-C32-00-1G (02-PCPI-0011-01) by the HPNS Team and submitted to the on-site laboratory for analysis.
- Site restoration activities were conducted over previously backfilled trench units in Work Area #33.
- A variety of housekeeping activities were performed throughout Parcel C by the HPNS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report



TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: April 18, 2012

RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

- The HPNS Team performed the following RSY3 processing activities:
 - Towed array survey activities were performed for ES Units 0685 and 0688.
 - ES Units 0686 and 0687 was prepared for upcoming towed array activities.
- The HPNS Team performed the following RSY4 processing activities:
 - A total of 18 truckloads of material were received for processing.
 - ES Unit 0645 was prepared for upcoming towed array activities.
 - Issued drawings to identify biased, characterization, and systematic sample collection locations for ES Units 0626, 0658, 0676, and 0680.
 - ES Units 0652 and 0694 were staged in the stockpile area pending receipt of the off-site analytical results.
- The HPNS Team continued radiological monitoring and control activities for the RSYs including incoming and outgoing equipment and materials, ingress and egress of personnel, dust suppression, and air monitoring, as appropriate.
- Following data reviews, the RASO concurred with staging ES Units 0652, 0659, 0674, and 0675 pending receipt of the off-site analytical data prior to transferring the materials to the DON non-LLRW contractor for disposal at a CERCLA landfill.

Basewide Support

- Portal Monitor Activities
 - A total of 46 empty trucks entered HPNS through the portal monitor with no alarms.
 - A total of 45 truckloads of material exited HPNS through the portal monitor with no alarms.
- One incoming materials and equipment survey was performed by the HPNS Team.

On-Site and Off-Site Laboratories

- On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:
 - Soil samples received for gamma spectroscopy analysis: 64
 - Swipe samples received for Protean counts: 13
 - Air samples received: 11
 - Samples analyzed by gamma spectroscopy: 98
 - Gamma spectroscopy samples recounted: 2
 - Protean swipe samples counted: 13
 - Protean air samples counted: 11
- A total of 88 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.



TETRA TECH EC, INC.

DAILY STATUS REPORT
Parcel E and Building 500 Series Removal Action

Report Date: April 18, 2012

RMAC – CTO 07

Overview

The HPNS Team continued field activities for the Building 517 Site, Shacks 79 and 80, the 500 Series Area, and Work Area #36. Details of the activities performed are provided in the sections below.

Building 517 Site

- The HPNS Team provided the RASO with revised on-site analytical results for the post-remediation samples collected from Class 1 Survey Unit 2. Samples 119 and 120 were recounted for a longer duration to meet the ^{60}Co MDA requirement. Because no activity above the release criteria was identified, systematic sample collection activities will be performed.

Shacks 79 and 80

- The HPNS Team performed Class 1 survey activities for Survey Unit 2. A post-remediation gamma static measurement was logged at 6,330 cpm. In addition, a soil sample was collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPNS Team issued drawings to identify locations for remediation in Class 1 Survey Unit 2.

500 Series Area

- The HPNS Team continued soil grading and debris removal in preparation for upcoming towed array surveys in Class 2 Survey Units 22 and 23.
- Approximately 15 cubic yards of soil was remediated from Class 1 Survey Units 17 and 18 by the HPNS Team and placed in LLRW bins AWIU000263 and GFLU002055 for off-site disposal.
- Towed array gamma scan surveys were performed over Survey Unit 13.
- The HPNS Team performed Class 1 survey activities as follows:
 - Survey Unit 13 – A total of 356 gamma scan readings were logged with a maximum reading of 6,994 cpm.

- Survey Unit 15 – A total of eight post-remediation gamma static measurements were logged with a maximum measurement of 6,968 cpm. In addition, eight soil samples were collected and submitted to the on-site laboratory for analysis.
- Survey Unit 17 – A total of two post-remediation gamma static measurements were logged with a maximum measurement of 6,692 cpm. In addition, two soil samples were collected and submitted to the on-site laboratory for analysis.
- Survey Unit 19 – A total of 36 systematic gamma static measurements were logged with a maximum measurement of 5,977 cpm. In addition, 36 soil samples were collected and submitted to the on-site laboratory for analysis.
- The RSO is in the process of reviewing the survey data generated for Survey Units 13, 15, 17, and 19.
- The HPNS Team provided the RASO with on-site analytical and survey results for the biased and systematic samples collected from Class 1 Survey Unit 3. Because no activity above the release criteria was identified, the systematic samples will be submitted to the off-site laboratory for analysis.
- The HPNS Team provided the RASO with total strontium analytical results for the elevated ^{137}Cs samples collected from Class 1 Survey Units 16 and 18; no further contamination was identified.
- The HPNS Team issued drawings to identify locations for remediation in Class 1 Survey Units 15 and 18 and for biased and systematic sample collection in Class 1 Survey Unit 14.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel C Storm Drain and Sanitary Sewer Removal Action

Report Date: April 25, 2012

RAD EMAC – CTO 002

Overview

The HPNS Team continued field activities for the North Pier and Work Areas #32, #33, and #34. Details of the work activities performed are provided in the sections below.

North Pier

- The HPNS Team provided the RASO with total strontium analytical results for the elevated samples collected from Class 1 Survey Unit 7; no further contamination was identified.
- The HPNS Team provided the RASO with off-site analytical results for the systematic samples collected from Class 1 Survey Unit 2; no activity above the release criteria was identified.

Parcel C Storm Drain and Sanitary Sewer Removal Activities

- Pipes and debris from trench segments 02-C33-00-3P, 02-C33-29-1D, -1W, -1X, -8E, 02-C34-28-3T, -4Z, -8B, and -8U were placed by the HPNS Team in LLRW bin AWIU000201 for off-site disposal.
- The HPNS Team provided the RASO with analytical results for the sediment sample collected from excavated Manhole MH1333 (02-PCMH1333-062-01). Because ¹³⁷Cs contamination was identified at 0.3499 pCi/g, this manhole will be disposed of as LLRW.
- A variety of housekeeping activities were performed throughout Parcel C by the HPNS Team including street sweeping.

Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report



TETRA TECH EC, INC.

DAILY PROGRESS REPORT
Hunters Point Naval Shipyard Basewide Radiological Support

Report Date: April 25, 2012

RMAC – CTO 004

Overview

The HPNS Team continued radiological basewide functions including support activities, radiological screening yard processing, and laboratory operations. Details of the work activities performed are provided in the sections below.

Radiological Screening Yard (RSY) Processing

- The HPNS Team issued a drawing to identify biased and systematic sample collection locations for ES Unit 0689 in RSY3.
- The HPNS Team performed the following RSY4 processing activities:
 - A total of 41 truckloads of material were received for processing.
 - Towed array survey activities were performed for ES Unit 0691.
 - Issued drawings to identify biased and systematic sample collection locations for ES Units 0681, 0684 and 0694.
- Following data reviews, the RASO concurred with transferring ES Units 0642 and 0644 to the DON non-LLRW contractor for off-site disposal at a CERCLA landfill.

Basewide Support

- One incoming and one outgoing materials and equipment surveys were performed by the HPNS Team.

On-Site and Off-Site Laboratories

- On-site laboratory staff continued to operate gamma spectroscopy detectors and the Protean unit. The following activities were completed:
 - Soil samples received for gamma spectroscopy analysis: 65
 - Swipe samples received for Protean counts: 8
 - Air samples received: 12
 - Samples analyzed by gamma spectroscopy: 86
 - Gamma spectroscopy samples recounted: 7
 - Protean swipe samples counted: 48
 - Protean air samples counted: 12
- A total of 322 samples currently are awaiting gamma spectroscopy analysis in the on-site laboratory.



TETRA TECH EC, INC.

DAILY STATUS REPORT

Parcel E and Building 500 Series Removal Action

Report Date: April 25, 2012

RMAC – CTO 07

Overview

The HPNS Team continued field activities for the Building 520 Site, Shacks 79 and 80, the 500 Series Area, and Work Area #36. Details of the activities performed are provided below.

Building 520 Site

- The HPNS Team provided the RASO with off-site analytical results for the systematic samples collected from Class 1 Survey Unit 5. Characterization and remediation will be continued due to the presence of ^{90}Sr contamination as follows:
 - Sample Point 56 (07520-S0005-F056-01) with ^{90}Sr at 1.19 pCi/g
 - Sample Point 57 (07520-S0005-F057-01) with ^{90}Sr at 0.894 pCi/g
- The HPNS Team issued drawings to identify locations for characterization sample collection in Class 1 Survey Unit 5.

Shacks 79 and 80

- The HPNS Team performed Class 1 survey activities for Survey Unit 2. A replacement systematic gamma static measurement was logged at 6,209 cpm. In addition, one soil sample was collected and submitted to the on-site laboratory for analysis. The RSO is in the process of reviewing these data.
- The HPNS Team provided the RASO with on-site analytical and survey results for the replacement systematic samples collected from Class 1 Survey Unit 1. Because no activity above the release criteria was identified, the 18 systematic samples will be submitted to the off-site laboratory for analysis.
- The HPNS Team provided the RASO with total strontium analytical results for the elevated samples collected from Class 1 Survey Unit 1; no further contamination was identified.

500 Series Area

- The HPNS Team removed fencing surrounding the tennis courts in preparation for towed array surveys in Class 2 Survey Unit 22.
- The HPNS Team performed Class 1 survey activities as follows:

- Survey Unit 13 – A total of two characterization gamma static measurements were logged with a maximum measurement of 6,848 cpm. In addition, two soil samples were collected and submitted to the on-site laboratory for analysis.
- Survey Unit 16 – A total of three characterization gamma static measurements were logged with a maximum measurement of 6,475 cpm. In addition, three soil samples were collected and submitted to the on-site laboratory for analysis.
- Survey Unit 18 – A characterization gamma static measurement was logged with a measurement of 5,715 cpm. In addition, one soil sample was collected and submitted to the on-site laboratory for analysis.
- Survey Unit 19 – A characterization gamma static measurement was logged with a measurement of 4,575 cpm. In addition, one soil sample was collected and submitted to the on-site laboratory for analysis.
- Survey Unit 21 – A total of two characterization gamma static measurements were logged with a maximum measurement of 5,370 cpm. In addition, two soil samples were collected and submitted to the on-site laboratory for analysis.
- The RSO is in the process of reviewing the survey data for Survey Units 13, 16, 18, 19, and 21.
- The HPNS Team provided the RASO with on-site analytical results for the systematic samples collected from Class 1 Survey Unit 19. Characterization and remediation will be continued due to the presence of ^{137}Cs contamination as follows:
 - Sample Point 54 (07500SA-S0019-F054-01) with ^{137}Cs at 0.1153 pCi/g
 - Sample Point 68 (07500SA-S0019-F068-01) with ^{137}Cs at 0.1556 pCi/g
 - Sample Point 74 (07500SA-S0019-F074-01) with ^{137}Cs at 0.1468 pCi/g
 - Sample Point 75 (07500SA-S0019-F074-01) with ^{137}Cs at 0.1645 pCi/g
- The HPNS Team provided the RASO with on-site analytical results for the characterization and post-remediation samples collected from Class 1 Survey Unit 17. Because no activity above the release criteria was identified, a replacement systematic soil sample will be collected for analysis.
- The HPNS Team provided the RASO with total strontium analytical results for the elevated samples collected from Class 1 Survey Units 16 and 17; no further contamination was identified.
- The HPNS Team issued drawings to identify locations for characterization sample collection in Class 1 Survey Units 5, 6, 13, 15, 19, and 20.

Parcel E Storm Drain and Sanitary Sewer Removal Activities

- The HPNS Team excavated approximately 492 cubic yards of soil from Work Area #36 and transferred the material to RSY4 for processing. Excavation activities were performed for the following trench segments:
 - 07-509-38-3T 9 linear feet completed
 - 07-509-38-3U 8 linear feet completed

- 07-509-38-8A 11 linear feet completed
 - 07-E36-38-3J 11 linear feet completed
 - 07-E36-38-3S 110 linear feet completed
 - 07-E36-38-3T 29 linear feet completed
 - 07-E36-38-3U 27 linear feet completed
 - 07-E36-39-1D 103 linear feet completed
 - 07-E36-39-1E 7 linear feet completed
 - 07-E36-39-1F 3 linear feet completed
 - 07-E36-39-8B 90 linear feet completed
 - 07-E36-39-8C 4 linear feet completed
 - 07-E36-39-8D 4 linear feet completed
 - 07-E36-39-8E 10 linear feet completed
- A total of 307 linear feet of trench (including excavated soil, manholes, and pipes) identified on the design drawings and 119 linear feet not identified on the design drawings were completed by the HPNS Team.
 - Manholes MH1301, MH1302, MH1303, and MH1326 along with pipes excavated from trench segments 07-509-38-3T, -8A, 07-E36-38-3T, 07-E36-39-8B, and -8D were placed on plastic pending further activities.
 - Sediment samples were collected from excavated Manholes MH1302 (07-PEMH1302-013-01) and MH1303 (07-PEMH1303-014-01) by the HPNS Team and submitted to the on-site laboratory for analysis.
 - A variety of housekeeping activities were performed throughout the Building 500 Series Area by the HPNS Team.

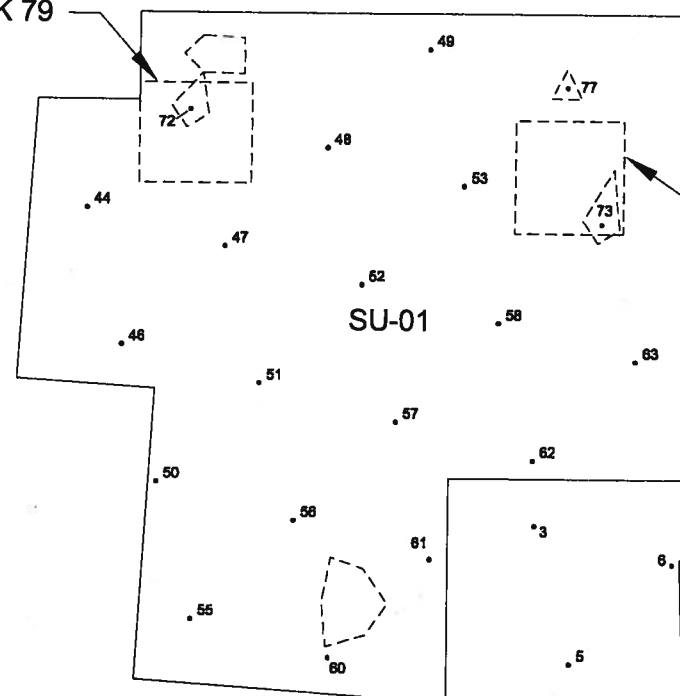
Issues/Items Pending Action

- Internal Draft Radiological Removal Action Completion Report



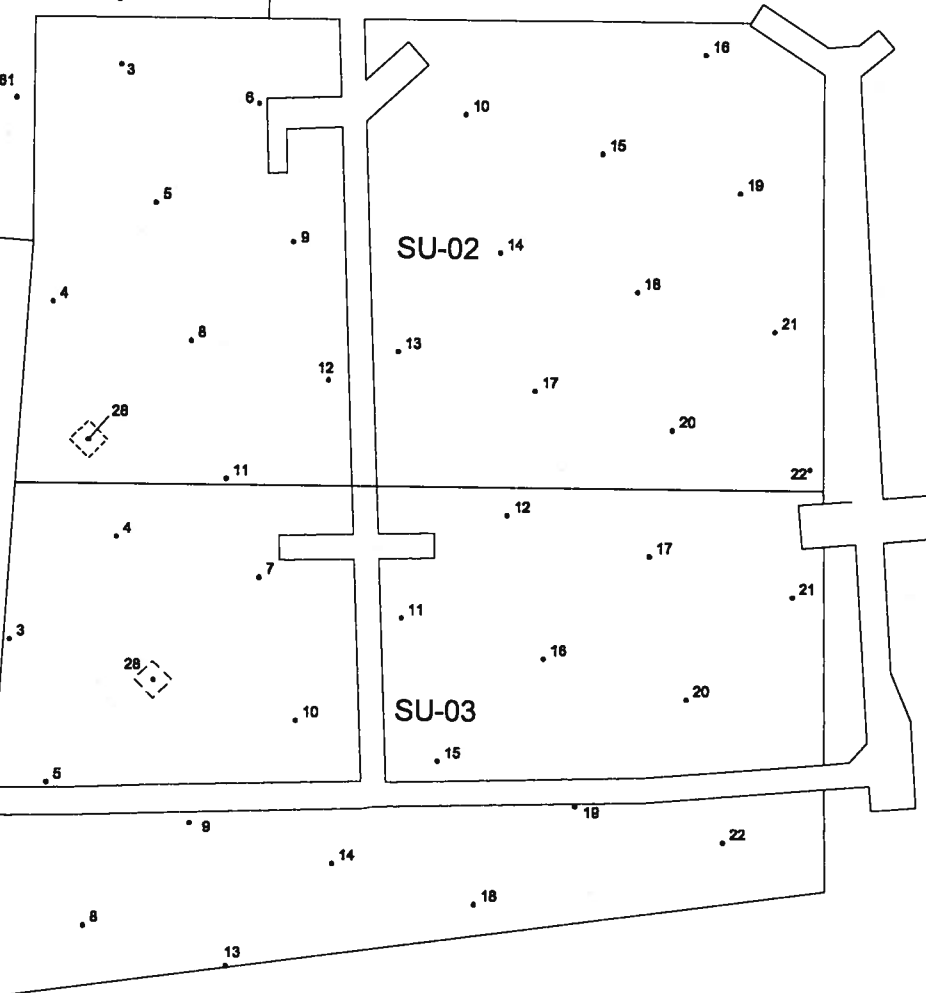
FORMER SHACK 79

SU-01
CLASS 1
835.85 m² (8997.07 ft²)



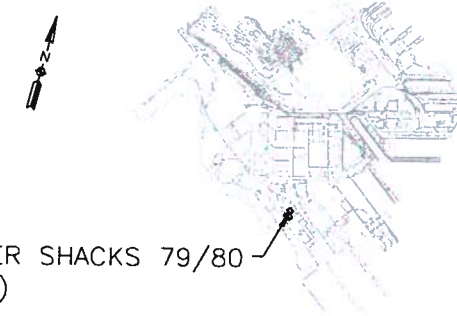
FORMER SHACK 80

SU-02
CLASS 1
844.72 m² (9092.45 ft²)



SU-03
CLASS 1
910.15 m² (9796.80 ft²)

FORMER SHACKS 79/80 (SITES) PLAN VIEW

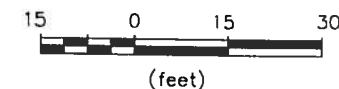


FORMER SHACKS 79/80
(SITES)

KEY PLAN

LEGEND

- FORMER SHACKS 79/80
- SURVEY UNIT
- SYSTEMATIC SAMPLES



BASE REALIGNMENT AND CLOSURE
PROGRAM MANAGEMENT OFFICE WEST
SAN DIEGO, CALIFORNIA

FINAL STATUS SURVEY

FORMER SHACKS 79/80 (SITES)

FIGURE 4-1

CLASS 1 SURVEY UNITS

HUNTERS POINT NAVAL SHIPYARD, SAN FRANCISCO, CALIFORNIA

REVISION:
AUTHOR: A.CRABTREE
PROJECT NO:
FILE: SEE BELOW



TETRA TECH EC, INC.

Area	Survey Unit	Sample Point	Sample Type	Sample ID	Date Collected	COC Radiological Technician
7980	1	1	Biased	077980-S0001-F001-01	15-Dec-11	Jeff Rolfe
7980	1	2	Biased	077980-S0001-F002-01	15-Dec-11	Jeff Rolfe
7980	1	3	Biased	077980-S0001-F003-01	15-Dec-11	Jeff Rolfe
7980	1	4	Systematic	077980-S0001-F004-01	15-Dec-11	Jeff Rolfe
7980	1	5	Systematic	077980-S0001-F005-01	15-Dec-11	Jeff Rolfe
7980	1	6	Systematic	077980-S0001-F006-01	15-Dec-11	Jeff Rolfe
7980	1	7	Systematic	077980-S0001-F007-01	15-Dec-11	Jeff Rolfe
7980	1	8	Systematic	077980-S0001-F008-01	15-Dec-11	Jeff Rolfe
7980	1	9	Systematic	077980-S0001-F009-01	15-Dec-11	Jeff Rolfe
7980	1	10	Systematic	077980-S0001-F010-01	15-Dec-11	Jeff Rolfe
7980	1	11	Systematic	077980-S0001-F011-01	15-Dec-11	Jeff Rolfe
7980	1	12	Systematic	077980-S0001-F012-01	15-Dec-11	Jeff Rolfe
7980	1	13	Systematic	077980-S0001-F013-01	15-Dec-11	Jeff Rolfe
7980	1	14	Systematic	077980-S0001-F014-01	15-Dec-11	Jeff Rolfe
7980	1	15	Systematic	077980-S0001-F015-01	15-Dec-11	Jeff Rolfe
7980	1	16	Systematic	077980-S0001-F016-01	15-Dec-11	Jeff Rolfe
7980	1	17	Systematic	077980-S0001-F017-01	15-Dec-11	Jeff Rolfe
7980	1	18	Systematic	077980-S0001-F018-01	15-Dec-11	Jeff Rolfe
7980	1	19	Systematic	077980-S0001-F019-01	15-Dec-11	Jeff Rolfe
7980	1	20	Systematic	077980-S0001-F020-01	15-Dec-11	Jeff Rolfe
7980	1	21	Systematic	077980-S0001-F021-01	15-Dec-11	Jeff Rolfe
7980	1	22	Systematic	077980-S0001-F022-01	15-Dec-11	Jeff Rolfe
7980	1	23	Systematic	077980-S0001-F023-01	15-Dec-11	Jeff Rolfe
7980	1	24	Characterization	077980-S0001-F024-01	22-Feb-12	Rick Zahensky
7980	1	25	Characterization	077980-S0001-F025-01	22-Feb-12	Rick Zahensky
7980	1	26	Characterization	077980-S0001-F026-01	22-Feb-12	Rick Zahensky
7980	1	27	Characterization	077980-S0001-F027-01	22-Feb-12	Rick Zahensky
7980	1	28	Characterization	077980-S0001-F028-01	22-Feb-12	Rick Zahensky
7980	1	29	Characterization	077980-S0001-F029-01	22-Feb-12	Rick Zahensky
7980	1	30	Characterization	077980-S0001-F030-01	22-Feb-12	Rick Zahensky
7980	1	31	Characterization	077980-S0001-F031-01	22-Feb-12	Rick Zahensky
7980	1	32	Characterization	077980-S0001-F032-01	01-Mar-12	Rick Zahensky
7980	1	33	Characterization	077980-S0001-F033-01	01-Mar-12	Rick Zahensky
7980	1	34	Characterization	077980-S0001-F034-01	01-Mar-12	Rick Zahensky
7980	1	35	Characterization	077980-S0001-F035-01	01-Mar-12	Rick Zahensky
7980	1	36	Characterization	077980-S0001-F036-01	01-Mar-12	Rick Zahensky
7980	1	37	Characterization	077980-S0001-F037-01	01-Mar-12	Rick Zahensky
7980	1	38	Characterization	077980-S0001-F038-01	01-Mar-12	Rick Zahensky
7980	1	39	Post-Remediation	077980-S0001-F039-01	19-Mar-12	Jeff Rolfe
7980	1	40	Post-Remediation	077980-S0001-F040-01	19-Mar-12	Jeff Rolfe
7980	1	41	Post-Remediation	077980-S0001-F041-01	19-Mar-12	Jeff Rolfe
7980	1	42	Post-Remediation	077980-S0001-F042-01	19-Mar-12	Jeff Rolfe
7980	1	43	Post-Remediation	077980-S0001-F043-01	19-Mar-12	Jeff Rolfe
7980	1	44	Systematic	077980-S0001-F044-01	27-Mar-12	Jeff Rolfe
7980	1	45	Systematic	077980-S0001-F045-01	27-Mar-12	Jeff Rolfe
7980	1	46	Systematic	077980-S0001-F046-01	27-Mar-12	Jeff Rolfe
7980	1	47	Systematic	077980-S0001-F047-01	27-Mar-12	Jeff Rolfe
7980	1	48	Systematic	077980-S0001-F048-01	27-Mar-12	Jeff Rolfe
7980	1	49	Systematic	077980-S0001-F049-01	27-Mar-12	Jeff Rolfe
7980	1	50	Systematic	077980-S0001-F050-01	27-Mar-12	Jeff Rolfe
7980	1	51	Systematic	077980-S0001-F051-01	27-Mar-12	Jeff Rolfe
7980	1	52	Systematic	077980-S0001-F052-01	27-Mar-12	Jeff Rolfe
7980	1	53	Systematic	077980-S0001-F053-01	27-Mar-12	Jeff Rolfe

On-Site Laboratory (pCi/g)

K-40	Ra-226	Cs-137	Bi-214	Pb-214
25.2	0.9137	0	0.5347	0.6151
24.41	0.279	0.02947	0.6561	0.6959
29.42	0.6357	0.0005157	0.6442	0.7351
3.995	0.178	-0.007648	0.2281	0.212
13.73	0.8166	0.04719	0.5112	0.514
4.331	0.5291	0.009105	0.3656	0.3297
12.45	0.4843	0.02396	0.2668	0.6064
9.152	0.7749	0.0242	0.3992	0.5419
11.53	0.751	0.009291	0.4401	0.371
6.653	0.3414	0.01244	0.4375	0.4691
10.72	0.4464	0.02122	0.3691	0.5004
7.606	0.6311	0.03228	0.5624	0.5477
3.15	0.4215	0	0.2474	0.3316
10.12	0.4843	0	0.2827	0.355
11.79	0.9344	0.01548	0.353	0.5071
11.67	0.2692	0	0.2766	0.3067
12.7	0.7933	0.007186	0.3407	0.4346
5.5	0.5534	0.005923	0.328	0.2337
14.87	0.5224	0.08356	0.3634	0.5333
13.53	0.3428	0.0226	0.4357	0.3494
18.9	1.173	0.01484	0.5403	0.5734
10.6	0	0.03294	0.3811	0.4016
9.804	0.4546	0.02828	0.3792	0.4024
12	0.594	0.07655	0.4369	0.6784
11.37	0.3717	0.06263	0.2895	0.5293
12.41	0.2002	0.1966	0.4688	0.5256
12.45	0.8052	0.06098	0.565	0.6447
17.44	0.9192	0.2127	0.5008	0.5147
14.19	0.6014	-0.0068	0.6479	0.771
20.13	0.9259	0.1712	0.5637	0.6508
19.44	0.9207	0.2058	0.6565	0.6507
19.22	1.177	-0.005728	0.8194	0.8552
19.11	1.045	-0.008283	0.8789	0.9538
18.54	0.7263	-0.009133	0.6511	0.7469
18.77	0.9042	0.00485	0.6933	0.8001
19.42	0.973	-0.005097	0.8762	0.8229
20.07	1.297	0	0.8428	0.9045
18.69	1.115	0.002846	0.8979	0.9326
9.357	0.4125	0	0.2115	0.3684
10.03	0.5296	-0.006999	0.2807	0.3167
9.906	0.6091	0.0004201	0.3704	0.3246
8.002	0.9139	-0.003948	0.3481	0.3471
9.565	1.055	-0.001767	0.3963	0.3762
15.44	1.198	0.05202	0.7115	0.8557
14.87	1.11	0.2188	0.4101	0.481
16.17	0.9619	0.02137	0.6985	0.837
14.42	1.208	-0.001148	0.4215	0.643
12.16	0.6543	0.01664	0.5025	0.4611
13.64	0.9049	0.02921	0.5865	0.6316
5.624	0.5366	-0.008329	0.1328	0.3165
14.53	1.283	0.01952	0.5703	0.5986
12.78	0.9157	0.02375	0.4409	0.4984
6.957	0.4753	0.0004446	0.2417	-0.00006399

Off-Site Laboratory (pCi/g)

K-40	Ra-226	Cs-137	Bi-214	Pb-214
4.9	0.387	-0.00721	0.387	0.364
14.2	0.739	0.131	0.739	0.769
3.62	0.389	-0.014	0.389	0.409
11.8	0.664	-0.03	0.664	0.631
5.96	0.891	0.0297	0.891	0.783
10.2	0.436	0	0.436	0.731
6.45	0.606	0.0151	0.606	0.65
7.49	0.597	0.00442	0.597	0.496
8.26	0.717	0.0397	0.717	0.556
4.3	0.229	0.0111	0.229	0.247
9.18	0.453	0.0118	0.453	0.472
13	0.76	0.00284	0.76	0.652
9.6	0.625	0.0324	0.625	0.59
11.9	0.56	0	0.56	0.519
5.95	0.458	0.00712	0.458	0.421
15.7	0.618	0.125	0.618	0.692
11.4	0.724	0.0485	0.724	0.759
19.7	0.611	0.00842	0.611	0.843
10.6	0.554	0.0285	0.554	0.539
8.59	0.455	0.0367	0.455	0.45
13	0.616	0.0518	0.616	0.674
13.8	0.77	0.0136	0.77	0.888
12.8	0.645	0.0275	0.645	0.715
7.57	0.644	0.0399	0.644	0.578
10.6	0.676	0.0244	0.676	0.744
4.06	0.543	-0.00252	0.543	0.376
12.3	0.604	0.0183	0.604	0.702
11.9	0.505	0.0121	0.505	0.654
5.94	0.489	0.0126	0.489	0.323

Area	Survey Unit	Sample Point	Sample Type	Sample ID	Date Collected	COC Radiological Technician
7980	1	54	Systematic	077980-S0001-F054-01	27-Mar-12	Jeff Rolfe
7980	1	55	Systematic	077980-S0001-F055-01	27-Mar-12	Jeff Rolfe
7980	1	56	Systematic	077980-S0001-F056-01	27-Mar-12	Jeff Rolfe
7980	1	57	Systematic	077980-S0001-F057-01	27-Mar-12	Jeff Rolfe
7980	1	58	Systematic	077980-S0001-F058-01	27-Mar-12	Jeff Rolfe
7980	1	59	Systematic	077980-S0001-F059-01	27-Mar-12	Jeff Rolfe
7980	1	60	Systematic	077980-S0001-F060-01	27-Mar-12	Jeff Rolfe
7980	1	61	Systematic	077980-S0001-F061-01	27-Mar-12	Jeff Rolfe
7980	1	62	Systematic	077980-S0001-F062-01	27-Mar-12	Jeff Rolfe
7980	1	63	Systematic	077980-S0001-F063-01	27-Mar-12	Jeff Rolfe
7980	1	64	Characterization	077980-S0001-F064-01	03-Apr-12	Jeff Rolfe
7980	1	65	Characterization	077980-S0001-F065-01	03-Apr-12	Jeff Rolfe
7980	1	66	Characterization	077980-S0001-F066-01	03-Apr-12	Jeff Rolfe
7980	1	67	Characterization	077980-S0001-F067-01	03-Apr-12	Jeff Rolfe
7980	1	68	Characterization	077980-S0001-F068-01	03-Apr-12	Jeff Rolfe
7980	1	69	Characterization	077980-S0001-F069-01	03-Apr-12	Jeff Rolfe
7980	1	70	Post-Remediation	077980-S0001-F070-01	06-Apr-12	Anthony Smith
7980	1	71	Post-Remediation	077980-S0001-F071-01	06-Apr-12	Anthony Smith
7980	1	72	Systematic	077980-S0001-F072-01	20-Apr-12	Jeff Rolfe
7980	1	73	Systematic	077980-S0001-F073-01	20-Apr-12	Jeff Rolfe
7980	1	74	Characterization	077980-S0001-F074-01	02-Jul-12	Rick Zahensky
7980	1	75	Characterization	077980-S0001-F075-01	02-Jul-12	Rick Zahensky
7980	1	76	Characterization	077980-S0001-F076-01	02-Jul-12	Rick Zahensky
7980	1	77	Systematic	077980-S0001-F077-01	02-Jul-12	Rick Zahensky
7980	2	1	Biased	077980-S0002-F001-01	04-Apr-12	Jeff Rolfe
7980	2	2	Biased	077980-S0002-F002-01	04-Apr-12	Jeff Rolfe
7980	2	3	Systematic	077980-S0002-F003-01	04-Apr-12	Jeff Rolfe
7980	2	4	Systematic	077980-S0002-F004-01	04-Apr-12	Jeff Rolfe
7980	2	5	Systematic	077980-S0002-F005-01	04-Apr-12	Jeff Rolfe
7980	2	6	Systematic	077980-S0002-F006-01	04-Apr-12	Jeff Rolfe
7980	2	7	Systematic	077980-S0002-F007-01	04-Apr-12	Jeff Rolfe
7980	2	8	Systematic	077980-S0002-F008-01	04-Apr-12	Jeff Rolfe
7980	2	9	Systematic	077980-S0002-F009-01	04-Apr-12	Jeff Rolfe
7980	2	10	Systematic	077980-S0002-F010-01	04-Apr-12	Jeff Rolfe
7980	2	11	Systematic	077980-S0002-F011-01	04-Apr-12	Jeff Rolfe
7980	2	12	Systematic	077980-S0002-F012-01	04-Apr-12	Jeff Rolfe
7980	2	13	Systematic	077980-S0002-F013-01	04-Apr-12	Jeff Rolfe
7980	2	14	Systematic	077980-S0002-F014-01	04-Apr-12	Jeff Rolfe
7980	2	15	Systematic	077980-S0002-F015-01	04-Apr-12	Jeff Rolfe
7980	2	16	Systematic	077980-S0002-F016-01	04-Apr-12	Jeff Rolfe
7980	2	17	Systematic	077980-S0002-F017-01	04-Apr-12	Jeff Rolfe
7980	2	18	Systematic	077980-S0002-F018-01	04-Apr-12	Jeff Rolfe
7980	2	19	Systematic	077980-S0002-F019-01	04-Apr-12	Jeff Rolfe
7980	2	20	Systematic	077980-S0002-F020-01	04-Apr-12	Jeff Rolfe
7980	2	21	Systematic	077980-S0002-F021-01	04-Apr-12	Jeff Rolfe
7980	2	22	Systematic	077980-S0002-F022-01	04-Apr-12	Jeff Rolfe
7980	2	23	Characterization	077980-S0002-F023-01	11-Apr-12	Jeff Rolfe
7980	2	24	Characterization	077980-S0002-F024-01	11-Apr-12	Jeff Rolfe
7980	2	25	Characterization	077980-S0002-F025-01	11-Apr-12	Jeff Rolfe
7980	2	26	Characterization	077980-S0002-F026-01	11-Apr-12	Jeff Rolfe
7980	2	27	Post-Remediation	077980-S0002-F027-01	18-Apr-12	Jeff Rolfe
7980	2	28	Systematic	077980-S0002-F028-01	25-Apr-12	Rick Zahensky
7980	3	1	Biased	077980-S0003-F001-01	11-Apr-12	Anthony Smith

On-Site Laboratory (pCi/g)				
K-40	Ra-226	Cs-137	Bi-214	Pb-214
8.22	0.5953	0.01421	0.2937	0.3236
19.21	1.048	-0.004932	0.6646	0.6805
12.4	0.5392	0.02224	0.5477	0.6347
10.55	0.5062	0.03709	0.483	0.4386
25.26	1.138	0.01915	0.6524	0.6986
13.45	0.6035	0.1169	0.6062	0.616
20.23	0.7575	0.07492	0.4957	0.6598
13.08	0.7307	0.02712	0.431	0.5529
22.52	0.9163	0.0117	0.6034	0.7355
13.99	0.5582	0.01908	0.2921	0.4789
8.604	-0.05862	0.01311	0.3911	0.3022
11.48	0.5624	0	0.4904	0.467
11.19	0.6287	0.01801	0.3388	0.4469
14.1	1.16	0.00106	0.6877	0.6105
17.91	1.218	0.01234	0.4406	0.4634
15.26	0.9631	0.001534	0.6553	0.7328
10.72	0.486	0.008305	0.1595	0.2334
9.331	0.782	-0.01113	0.2341	0.3407
8.851	0.7155	-0.006107	0.3015	0.3346
6.258	0.3147	-0.0006957	0.3098	0.4072
9.909	0.5944	0.003967	0.3627	0.431
0.1279	-0.003034	0.0126	0.03288	-0.03844
0.103	-0.1327	0	0.02184	0
0.3878	-0.0372	0.00251	-0.004521	-0.01145
22.55	0.6674	0.04442	0.5596	0.5689
0.06615	0.09367	0.0007372	0.04911	0.01359
0.2476	0.09348	0	0.03269	0.07683
20.41	0.7453	0.17	0.4747	0.5835
4.202	0.6336	0.03166	0.1495	0.1021
0.3656	-0.2169	-0.003176	0.04424	0.03832
0.2749	0.0815	0	0	0.04786
0.6615	0.1123	0	0.04404	0.04351
1.009	0.143	-0.002017	0.0339	-0.004279
0.3326	-0.0274	0	0.05052	0
0.7109	-0.03862	0.0009595	0.0001165	0.07237
0.347	0	0	0.04571	0.04693
1.633	0.2212	0.01027	0.09416	0.06213
0.6001	-0.1453	0.01705	0.08369	0.04676
0.6679	0.5089	-0.003346	0.1169	0.152
0.6165	0.1342	0.003088	0.01697	0.1077
0.3956	0	0.002755	0.04995	0.01351
0.659	0	0.01147	-0.02188	-0.006443
0.3496	0.002615	0.002154	-0.02011	-0.0306
0.09809	0.4546	0.0002043	0.02788	-0.0314
0.04134	0.0894	0.008776	0.02346	0.01893
0.02219	0	-0.001612	0.002061	0.001059
0.3205	0.01241	-0.003908	0.01277	-0.0301
-0.573	-0.2674	-0.002725	0.02335	0.002588
8.63	0.7232	0.006906	0.3929	0.4034
11.02	1.313	0.04653	0.3236	0.4077

Off-Site Laboratory (pCi/g)				
K-40	Ra-226	Cs-137	Bi-214	Pb-214
5.81	0.443	0.00816	0.443	0.563
17	0.701	-0.0128	0.701	0.923
13.5	0.705	-0.011	0.705	0.7
8.93	0.54	0.0162	0.54	0.556
21.6	0.781	0.00471	0.781	0.901
17.2	0.623	0.107	0.623	0.699
12.9	0.644	0.0431	0.644	0.56
21.8	0.722	0.00271	0.722	0.835
11	0.628	0.0401	0.628	0.553
4.81	0.236	-0.0185	0.236	0.39
4.99	0.341	-0.0107	0.341	0.483
7.31	0.429	-0.0281	0.429	0.45
0.983	0.0858	0	0.0858	0.0542
19.9	0.691	0.0539	0.691	0.702
-0.223	0.0484	0.0203	0.0484	0.191
0.222	0.101	0	0.101	0.173
4.43	0.202	0.0457	0.202	0.368
0.0912	0.0333	0	0.0333	0.0439
0.974	0.101	0.00421	0.101	0.164
0.506	0.182	0.0251	0.182	0.202
0.349	0.156	-0.00527	0.156	0.0869
-0.347	0.0589	0.0301	0.0589	0.041
0.145	0.0957	0.0136	0.0957	0.167
0.421	0.026	0.016	0.026	0.0571
1.78	0.279	-0.0207	0.279	0.108
-0.291	0.216	0.0123	0.216	0.145
2.23	0.206	-0.00142	0.206	0.122
1.13	0.13	-0.0119	0.13	0.265
0.746	0.013	0.00978	0.013	0.066
0.585	0.209	0.0121	0.209	0.0824
0.177	0.0892	0	0.0892	0.177
6.15	0.363	-0.0197	0.363	0.332

Area	Survey Unit	Sample Point	Sample Type	Sample ID	Date Collected	COC Radiological Technician
7980	3	2	Biased	077980-S0003-F002-01	11-Apr-12	Anthony Smith
7980	3	3	Systematic	077980-S0003-F003-01	11-Apr-12	Anthony Smith
7980	3	4	Systematic	077980-S0003-F004-01	11-Apr-12	Anthony Smith
7980	3	5	Systematic	077980-S0003-F005-01	11-Apr-12	Anthony Smith
7980	3	6	Systematic	077980-S0003-F006-01	11-Apr-12	Anthony Smith
7980	3	7	Systematic	077980-S0003-F007-01	11-Apr-12	Anthony Smith
7980	3	8	Systematic	077980-S0003-F008-01	11-Apr-12	Anthony Smith
7980	3	9	Systematic	077980-S0003-F009-01	11-Apr-12	Anthony Smith
7980	3	10	Systematic	077980-S0003-F010-01	11-Apr-12	Anthony Smith
7980	3	11	Systematic	077980-S0003-F011-01	11-Apr-12	Anthony Smith
7980	3	12	Systematic	077980-S0003-F012-01	11-Apr-12	Anthony Smith
7980	3	13	Systematic	077980-S0003-F013-01	11-Apr-12	Anthony Smith
7980	3	14	Systematic	077980-S0003-F014-01	11-Apr-12	Anthony Smith
7980	3	15	Systematic	077980-S0003-F015-01	11-Apr-12	Anthony Smith
7980	3	16	Systematic	077980-S0003-F016-01	11-Apr-12	Anthony Smith
7980	3	17	Systematic	077980-S0003-F017-01	11-Apr-12	Anthony Smith
7980	3	18	Systematic	077980-S0003-F018-01	11-Apr-12	Anthony Smith
7980	3	19	Systematic	077980-S0003-F019-01	11-Apr-12	Anthony Smith
7980	3	20	Systematic	077980-S0003-F020-01	11-Apr-12	Anthony Smith
7980	3	21	Systematic	077980-S0003-F021-01	11-Apr-12	Anthony Smith
7980	3	22	Systematic	077980-S0003-F022-01	11-Apr-12	Anthony Smith
7980	3	23	Characterization	077980-S0003-F023-01	23-May-12	Rick Zahensky
7980	3	24	Characterization	077980-S0003-F024-01	23-May-12	Rick Zahensky
7980	3	25	Characterization	077980-S0003-F025-01	23-May-12	Rick Zahensky
7980	3	26	Characterization	077980-S0003-F026-01	23-May-12	Rick Zahensky
7980	3	27	Post-Remediation	077980-S0003-F027-01	29-May-12	Rick Zahensky
7980	3	28	Systematic	077980-S0003-F028-01	06-Jun-12	Rick Zahensky

On-Site Laboratory (pCi/g)

K-40	Ra-226	Cs-137	Bi-214	Pb-214
20.53	0.4321	0	0.6139	0.5619
2.327	0.6625	0.016	0	0.08321
16.68	0.5168	0.08785	0.2324	0.4176
9.376	0.355	0.01312	0.3131	0.4078
17.21	0.4707	0.07664	0.336	0.3993
2.063	0.4687	0.01285	-0.01275	0.2298
8.403	0.3923	0.01992	0.2231	0.3474
16.3	1.04	0.04546	0.4853	0.5774
14.67	0.6822	0.01961	0.3365	0.5222
11.86	0.6482	0.006625	0.3019	0.4352
4.921	0.1965	0	0.08739	0.07117
10.95	0.7956	0.005949	0.3818	0.4547
17.07	1.078	0.04792	0.4632	0.5057
16.72	0.5496	-0.0005035	0.5319	0.5479
7.97	0.8494	0	0.3031	0.3233
0.5878	0.09573	0	0.06269	0.04347
11.94	0.5192	0.009367	0.5287	0.5466
13.63	0.3115	0.01601	0.4486	0.2559
5.444	0.4733	0.011	0.1841	0.2449
6.698	0.5513	0.005566	0.2974	0.1757
5.148	0.6437	0.00008576	0.1843	0.3832
10.25	0.4833	-0.005974	0.503	0.6777
9.074	0.5956	0	0.5058	0.5089
9.162	0.5792	0	0.4378	0.5702
11.31	0.6039	-0.01034	0.5651	0.6842
9.589	0.8554	0.007865	0.3286	0.5534
9.771	0.3344	0.005558	0.3884	0.4679

Off-Site Laboratory (pCi/g)

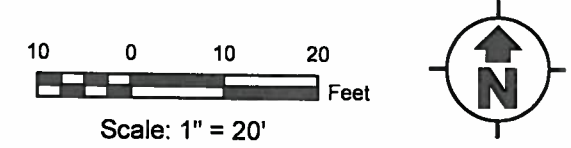
K-40	Ra-226	Cs-137	Bi-214	Pb-214
1.36	0.0623	0.0066	0.0623	0.312
14.7	0.559	0.0614	0.559	0.703
9.68	0.268	-0.00179	0.268	0.458
15.2	0.49	0.119	0.49	0.551
1.49	0.29	-0.00263	0.29	0.11
7.51	0.432	0.0306	0.432	0.393
13	0.608	0.0248	0.608	0.601
12.5	0.484	0.0304	0.484	0.788
12.3	0.453	0.0455	0.453	0.695
3.11	0.173	0.029	0.173	0.248
10.9	0.376	0.0256	0.376	0.597
15	0.546	0.0553	0.546	0.666
14.1	0.538	-0.0137	0.538	0.665
8.36	0.435	0.0173	0.435	0.606
0.361	0.0364	0.000975	0.0364	0.11
10.8	0.62	-0.00109	0.62	0.662
8.31	0.453	0.0299	0.453	0.628
4.16	0.259	0.0012	0.259	0.332
6.41	0.356	0	0.356	0.421
4.51	0.274	0.0159	0.274	0.41
9.18	0.427	-0.0185	0.427	0.41


Highlighted Activities: Ra-226 ≥ 1.633 (On-site) & 1.375 (Off-site); Cs-137 ≥ 0.113 ; Bi-214 ≥ 1.485 ; Pb-214 ≥ 1.485 (pCi/g)



LEGEND

- GAMMA TOTAL, <1 SIGMA
- GAMMA TOTAL, ≥1 AND <2 SIGMA
- GAMMA TOTAL, ≥2 AND <3 SIGMA
- GAMMA TOTAL, ≥3 AND <4 SIGMA
- GAMMA TOTAL, ≥4 AND <5 SIGMA
- GAMMA TOTAL, ≥5 AND <6 SIGMA
- GAMMA TOTAL, ≥6 SIGMA
- BIAS SAMPLE
- SYSTEMATIC SAMPLE
- ROAD
- BUILDING
- SCREENING PAD
- WATER



BASE REALIGNMENT AND CLOSURE PROGRAM MANAGEMENT OFFICE WEST SAN DIEGO, CALIFORNIA	
SU-02 Bldg 79/80 HUNTERS POINT SHIPYARD SAN FRANCISCO, CALIFORNIA	
REVIEW: 0 AUTHOR: TJS DCN: ECSD-XXXX-XXXX-XXXX FILE NUMBER: 7980-SU02.mxd	 TETRA TECH EC, INC.

RADIATION/CONTAMINATION SURVEY SUPPLEMENT

Date: 11/18/2011		Time: 07:30		INSTRUMENTATION USED				
		Model Inst/Det.	Serial Number	Calibration Due Date	Instrument % Efficiency	Total % Efficiency	MDC/MDA + (dpm/100cm ²)	Background + (dpm/100cm ²)
Survey Number: HPS-SU-234								
Location: Parcel C								
Surveyor: R. Roberson								
Reviewed By: (Print & Sign)		2350-1 44-10	117563 215116	6/8/2012				
Isotopes of Concern: ²²⁶ Ra ⁹⁰ Sr ¹³⁷ Cs								
Description of drawing: Trench Scan Survey								
Comments: Scan range for 2350-1 Instrument is 3.59 - 7.26 Kcpm 3 sigma investigation level for 2350-1 Instrument is 8028 cpm Picture is representative of material surveyed.					denotes swipe location or fixed α/β readings # denotes G/A radiation readings #/# denotes contact / 1 meter radiation readings. * denotes highest radiation reading on contact LAW denotes large area mass/in wipe Δ denotes static location. * Unless Otherwise Noted All readings in μR/hr unless otherwise noted K = 1000			

RADIATION/CONTAMINATION SURVEY SUPPLEMENT

SURVEY NUMBER: HPS-SU-234								
SURVEYOR: R. Roberson					LOCATION: Parcel C			
Location	Exposure Rate (μ R/hr)		Fixed + Removable (NET)			Removable (NET)		Comments
	Contact	1 Meter	Gamma (cpm)	Alpha dpm/100cm ²	Beta/Gamma dpm/100cm ²	Alpha dpm/100cm ²	Beta/Gamma dpm/100cm ²	
1			5133					
2			5409					
3			5501					
4			5376					
5			5280					
6			5276					
7			5603					
8			5333					
9			5270					
10			5602					
11			5447					
12			5391					
13			5184					
14			5331					
15			5502					
16			5310					
17			5666					
18			5213					
Reviewer:						Date:		

K-169

2350ID	Survey/Misc	Surveyor/Initials	Survey/Type	Data/Type	Bldg	Survey/Unit	Location	Reg/Num	Date/Time	Gamma/CPM	Cnt/Time	IsValid	Log/Mode	Importer/Initials	Import/Date
599 116S1A	RR	B. J. 2.3	S	GST	PCT	234 F	234 F	1	11/18/2011	5133	1.00	TRUE S		Thorpe.Miller	N/A
599 116S1A	RR	B. J. 5.2	S	GST	PCT	234 F	234 F	2	11/18/2011	5409	1.00	TRUE S		Thorpe.Miller	N/A
599 116S1A	RR	7.165	S	GST	PCT	234 F	234 F	3	11/18/2011	5501	1.00	TRUE S		Thorpe.Miller	N/A
599 116S1A	RR	B. J. 4.9	S	GST	PCT	234 F	234 F	4	11/18/2011	5376	1.00	TRUE S		Thorpe.Miller	N/A
599 116S1A	RR	J. 3.68	S	GST	PCT	234 F	234 F	5	11/18/2011	5280	1.00	TRUE S		Thorpe.Miller	N/A
599 116S1A	RR	H. 1.69	S	GST	PCT	234 F	234 F	6	11/18/2011	5276	1.00	TRUE S		Thorpe.Miller	N/A
599 116S1A	RR	O. 1.52	S	GST	PCT	234 F	234 F	7	11/18/2011	5603	1.00	TRUE S		Thorpe.Miller	N/A
599 116S1A	RR	C. 1.53	S	GST	PCT	234 F	234 F	8	11/18/2011	5333	1.00	TRUE S		Thorpe.Miller	N/A
599 116S1A	RR	B. 2.85	S	GST	PCT	234 F	234 F	9	11/18/2011	5270	1.00	TRUE S		Thorpe.Miller	N/A
599 116S1A	RR	O. 1.62	S	GST	PCT	234 F	234 F	10	11/18/2011	5602	1.00	TRUE S		Thorpe.Miller	N/A
599 116S1A	RR	- 0.262	S	GST	PCT	234 F	234 F	11	11/18/2011	5447	1.00	TRUE S		Thorpe.Miller	N/A
599 116S1A	RR	C. 4.84	S	GST	PCT	234 F	234 F	12	11/18/2011	5391	1.00	TRUE S		Thorpe.Miller	N/A
599 116S1A	RR	O. 8.56	S	GST	PCT	234 F	234 F	13	11/18/2011	5184	1.00	TRUE S		Thorpe.Miller	N/A
599 116S1A	RR	O. 2.79	S	GST	PCT	234 F	234 F	14	11/18/2011	5331	1.00	TRUE S		Thorpe.Miller	N/A
599 116S1A	RR	O. 9.27	S	GST	PCT	234 F	234 F	15	11/18/2011	5502	1.00	TRUE S		Thorpe.Miller	N/A
599 116S1A	RR	I. 8.64	S	GST	PCT	234 F	234 F	16	11/18/2011	5310	1.00	TRUE S		Thorpe.Miller	N/A
599 116S1A	RR	O. 6.61	S	GST	PCT	234 F	234 F	17	11/18/2011	5666	1.00	TRUE S		Thorpe.Miller	N/A
599 116S1A	RR	3.276	S	GST	PCT	234 F	234 F	18	11/18/2011	5213	1.00	TRUE S		Thorpe.Miller	N/A
599 116S1A	JC		S	GST	PCT	238 F	238 F	18	4/12/2012	5340	1.00	TRUE S		Thorpe.Miller	N/A
599 116S1A	JC		S	GST	PCT	238 F	238 F	19	4/12/2012	5113	1.00	TRUE S		Thorpe.Miller	N/A
599 116S1A	JC		S	GST	PCT	238 F	238 F	20	4/12/2012	5374	1.00	TRUE S		Thorpe.Miller	N/A
599 116S1A	JC		S	GST	PCT	238 F	238 F	21	4/12/2012	5252	1.00	TRUE S		Thorpe.Miller	N/A
599 116S1A	JC		S	GST	PCT	238 F	238 F	22	4/12/2012	5461	1.00	TRUE S		Thorpe.Miller	N/A
599 116S1A	JC		S	GST	PCT	238 F	238 F	23	4/12/2012	5312	1.00	TRUE S		Thorpe.Miller	N/A
599 116S1A	JC		S	GST	PCT	238 F	238 F	24	4/12/2012	5103	1.00	TRUE S		Thorpe.Miller	N/A
599 116S1A	JC		S	GST	PCT	238 F	238 F	25	4/12/2012	5355	1.00	TRUE S		Thorpe.Miller	N/A
599 116S1A	JC		S	GST	PCT	238 F	238 F	26	4/12/2012	5292	1.00	TRUE S		Thorpe.Miller	N/A
599 116S1A	JC		S	GST	PCT	238 F	238 F	27	4/12/2012	5220	1.00	TRUE S		Thorpe.Miller	N/A
599 116S1A	JC		S	GST	PCT	238 F	238 F	28	4/12/2012	5437	1.00	TRUE S		Thorpe.Miller	N/A
599 116S1A	JC		S	GST	PCT	238 F	238 F	29	4/12/2012	5148	1.00	TRUE S		Thorpe.Miller	N/A
599 116S1A	JC		S	GST	PCT	238 F	238 F	30	4/12/2012	5359	1.00	TRUE S		Thorpe.Miller	N/A
599 116S1A	JC		S	GST	PCT	238 F	238 F	31	4/12/2012	5273	1.00	TRUE S		Thorpe.Miller	N/A
599 116S1A	JC		S	GST	PCT	238 F	238 F	32	4/12/2012	5422	1.00	TRUE S		Thorpe.Miller	N/A
599 116S1A	JC		S	GST	PCT	238 F	238 F	33	4/12/2012	5329	1.00	TRUE S		Thorpe.Miller	N/A
599 116S1A	JC		S	GST	PCT	238 F	238 F	34	4/12/2012	5237	1.00	TRUE S		Thorpe.Miller	N/A
599 116S1A	JC		S	GST	PCT	238 F	238 F	35	4/12/2012	5343	1.00	TRUE S		Thorpe.Miller	N/A
599 116S1A	JC		S	GST	PCT	242 F	242 F	25	4/17/2012	5316	1.00	TRUE S		Thorpe.Miller	N/A
599 116S1A	JC		S	GST	PCT	242 F	242 F	26	4/17/2012	5455	1.00	TRUE S		Thorpe.Miller	N/A
599 116S1A	JC		S	GST	PCT	242 F	242 F	27	4/17/2012	5138	1.00	TRUE S		Thorpe.Miller	N/A
599 116S1A	JC		S	GST	PCT	242 F	242 F	28	4/17/2012	5371	1.00	TRUE S		Thorpe.Miller	N/A
599 116S1A	JC		S	GST	PCT	242 F	242 F	29	4/17/2012	5480	1.00	TRUE S		Thorpe.Miller	N/A
599 116S1A	JC		S	GST	PCT	242 F	242 F	30	4/17/2012	5266	1.00	TRUE S		Thorpe.Miller	N/A
599 116S1A	JC		S	GST	PCT	242 F	242 F	31	4/17/2012	5229	1.00	TRUE S		Thorpe.Miller	N/A
599 116S1A	JC		S	GST	PCT	242 F	242 F	32	4/17/2012	5110	1.00	TRUE S		Thorpe.Miller	N/A
599 116S1A	JC		S	GST	PCT	242 F	242 F	33	4/17/2012	5586	1.00	TRUE S		Thorpe.Miller	N/A
599 116S1A	JC		S	GST	PCT	242 F	242 F	34	4/17/2012	5363	1.00	TRUE S		Thorpe.Miller	N/A

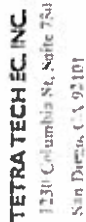
599 116S1A	JC	S	GST	PCT	242 F	35	4/17/2012	5236	1.00	TRUE S	Thorpe.Miller	N/A
599 116S1A	JC	S	GST	PCT	242 F	36	4/17/2012	5150	1.00	TRUE S	Thorpe.Miller	N/A
599 116S1A	JC	S	GST	PCT	242 F	37	4/17/2012	5194	1.00	TRUE S	Thorpe.Miller	N/A
599 116S1A	JC	S	GST	PCT	242 F	38	4/17/2012	5440	1.00	TRUE S	Thorpe.Miller	N/A
599 116S1A	JC	S	GST	PCT	242 F	39	4/17/2012	5219	1.00	TRUE S	Thorpe.Miller	N/A
599 116S1A	JC	S	GST	PCT	242 F	40	4/17/2012	5301	1.00	TRUE S	Thorpe.Miller	N/A
599 116S1A	JC	S	GST	PCT	242 F	41	4/17/2012	5175	1.00	TRUE S	Thorpe.Miller	N/A
599 116S1A	JC	S	GST	PCT	242 F	42	4/17/2012	5488	1.00	TRUE S	Thorpe.Miller	N/A
599 116S1A	JC	S	GST	PCT	302 F	5	5/22/2012	5831	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	302 F	6	5/22/2012	5945	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	302 F	7	5/22/2012	5796	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	302 F	8	5/22/2012	6003	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	302 F	9	5/22/2012	5781	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	302 F	10	5/22/2012	5847	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	302 F	11	5/22/2012	5955	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	302 F	12	5/22/2012	5720	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	302 F	13	5/22/2012	5874	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	302 F	14	5/22/2012	5613	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	302 F	15	5/22/2012	5701	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	302 F	16	5/22/2012	5863	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	302 F	17	5/22/2012	5911	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	302 F	18	5/22/2012	5734	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	302 F	19	5/22/2012	5950	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	302 F	20	5/22/2012	5863	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	302 F	21	5/22/2012	5701	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	302 F	22	5/22/2012	5822	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	304 F	11	5/31/2012	5107	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	304 F	12	5/31/2012	5033	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	304 F	13	5/31/2012	5266	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	304 F	14	5/31/2012	5119	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	304 F	15	5/31/2012	5270	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	304 F	16	5/31/2012	5099	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	304 F	17	5/31/2012	5221	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	304 F	18	5/31/2012	5319	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	304 F	19	5/31/2012	5001	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	304 F	20	5/31/2012	5177	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	304 F	21	5/31/2012	5306	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	304 F	22	5/31/2012	5100	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	304 F	23	5/31/2012	5061	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	304 F	24	5/31/2012	5421	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	304 F	25	5/31/2012	5393	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	304 F	26	5/31/2012	5803	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	304 F	27	5/31/2012	5150	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	304 F	28	5/31/2012	5241	1.00	TRUE S	Thorpe.Miller	N/A



TS 00327

Project Name Parcel C Trench Survey		PO Number		G A M A S P E C		S R O I		A L P H A		LABORATORY NAME		Project Information Section	
Project Location HUNTERS POINT		Project Number		N/A						ONSITE - Carlits & Tompkins, Ltd.			
Sampler Name <i>J. W. Nunnally</i>		Airbill Number		N/A						<i>L.A. 90-01-001</i>			
Project Chemist LISA BIENKOWSKI		Project Chemist Phone		949-756-7592									
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T A F	I	I	C	COMMENTS	LOCATION	SAMPLE ID	
02-PCT-234-001	11/18/2011	1005	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
02-PCT-234-002	11/18/2011	1010	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
02-PCT-234-003	11/18/2011	1015	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
02-PCT-234-004	11/18/2011	1020	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
02-PCT-234-005	11/18/2011	1025	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
02-PCT-234-006	11/18/2011	1030	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
02-PCT-234-007	11/18/2011	1035	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
02-PCT-234-008	11/18/2011	1040	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
02-PCT-234-009	11/18/2011	1045	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
02-PCT-234-010	11/18/2011	1050	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
02-PCT-234-011	11/18/2011	1055	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
02-PCT-234-012	11/18/2011	1100	1		S		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				

Relinquished by: (signature) L. W. N.	Date 11-18-11	Received by: (signature)
Company V.V.S.	Time 1345	Company C.I.
Relinquished by: (signature)	Date	Received by: (signature)
Company	Time	Company
Relinquished by: (signature)	Date	Received by: (signature)
Company	Time	Company



Project Name Parcel C Trench Survey		PG Number N/A		Project Information Section					
Project Location HUNTERS POINT		Project Number 4044-0002		LABORATORY NAME ONSITE - Curtis & Tompkins, Ltd.					
Sampler Name J. Tompkins		Airbill Number N/A		LABORATORY ID					
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592							
SAMPLE ID	DATE	TIME	Containers	LEVEL	TYPE	TEST	COMMENTS	LOCATION	SAMPLE ID
02-PCT-234-013	11/18/2011	1105	1		S	<input checked="" type="checkbox"/>			
02-PCT-234-014	11/18/2011	1110	1		S	<input checked="" type="checkbox"/>			
02-PCT-234-015	11/18/2011	1115	1		S	<input checked="" type="checkbox"/>			
02-PCT-234-016	11/18/2011	1120	1		S	<input checked="" type="checkbox"/>			
02-PCT-234-017	11/18/2011	1125	1		S	<input checked="" type="checkbox"/>			
02-PCT-234-018	11/18/2011	1130	1		S	<input checked="" type="checkbox"/>			

RELINQUISHED BY: (signature)		Date	Received by: (signature)	LABORATORY INSTRUCTIONS/COMMENTS	SAMPLING COMMENTS
Company		Time	Company		
RELINQUISHED BY: (signature)		Date	Received by: (signature)	COMPOSITE DESCRIPTION	
Company		Time	Company		
RELINQUISHED BY: (signature)		Date	Received by: (signature)	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY) TEMPERATURE: SAMPLE CONDITION: COOLER SEAL:	
Company		Time	Company		

RADIATION/CONTAMINATION SURVEY SUPPLEMENT

Date: 4/12/2012 Time: 08:30		INSTRUMENTATION USED						
		Model Inst/Det.	Serial Number	Calibration Due Date	Instrument % Efficiency	Total % Efficiency	MDC/MDA + (dpm/100cm ²)	Background + (dpm/100cm ²)
Survey Number: HPS-SU-238								
Location: Parcel C								
Surveyor: J. Cunningham								
Reviewed By: (Print & Sign)		2350-1 44-10	117563 215116	6/8/2012				
Isotopes of Concern: ²²⁶ Ra ⁹⁰ Sr ¹³⁷ Cs								
Description of drawing: Trench Scan Survey								
Comments: Scan range for 2350-1 Instrument is 3.14 - 7.37 Kcpm 3 sigma investigation level for 2350-1 Instrument is 8028 cpm Picture is representative of material surveyed.					denotes swipe location or fixed α/β readings # denotes G/A radiation readings #/# denotes contact / 1 meter radiation readings. * denotes highest radiation reading on contact LAW denotes large area massline wipe Δ denotes static location • Unless Otherwise Noted All readings in μR/hr unless otherwise noted K = 1000			

RADIATION/CONTAMINATION SURVEY SUPPLEMENT

SURVEY NUMBER: HPS-SU-238								
SURVEYOR: J. Cunningham				LOCATION: Parcel C				
Location	Exposure Rate (μ R/hr)		Gamma (cpm)	Fixed + Removable (NET)		Removable (NET)		Comments
	Contact	1 Meter		Alpha dpm/100cm ²	Beta/Gamma dpm/100cm ²	Alpha dpm/100cm ²	Beta/Gamma dpm/100cm ²	
18			5340					
19			5113					
20			5374					
21			5252					
22			5461					
23			5312					
24			5103					
25			5355					
26			5292					
27			5220					
28			5437					
29			5148					
30			5359					
31			5273					
32			5422					
33			5329					
34			5237					
35			5343					
Reviewer:							Date:	

2350ID	SurveyMeasure	SurveyorInitials	SurveyType	Data Type	Bldg	SurveyUnit	Location	RegNum	DateTime	GammaCPM	CntTime	IsValid	LogMode	ImporterInitials	ImportDate
599	11651A	RR	S	GST	PCT	234 F	234 F	1	11/18/2011	5133	1.00	TRUE S		Thorpe.Miller	N/A
599	11651A	RR	S	GST	PCT	234 F	234 F	2	11/18/2011	5409	1.00	TRUE S		Thorpe.Miller	N/A
599	11651A	RR	S	GST	PCT	234 F	234 F	3	11/18/2011	5501	1.00	TRUE S		Thorpe.Miller	N/A
599	11651A	RR	S	GST	PCT	234 F	234 F	4	11/18/2011	5376	1.00	TRUE S		Thorpe.Miller	N/A
599	11651A	RR	S	GST	PCT	234 F	234 F	5	11/18/2011	5280	1.00	TRUE S		Thorpe.Miller	N/A
599	11651A	RR	S	GST	PCT	234 F	234 F	6	11/18/2011	5276	1.00	TRUE S		Thorpe.Miller	N/A
599	11651A	RR	S	GST	PCT	234 F	234 F	7	11/18/2011	5603	1.00	TRUE S		Thorpe.Miller	N/A
599	11651A	RR	S	GST	PCT	234 F	234 F	8	11/18/2011	5333	1.00	TRUE S		Thorpe.Miller	N/A
599	11651A	RR	S	GST	PCT	234 F	234 F	9	11/18/2011	5270	1.00	TRUE S		Thorpe.Miller	N/A
599	11651A	RR	S	GST	PCT	234 F	234 F	10	11/18/2011	5602	1.00	TRUE S		Thorpe.Miller	N/A
599	11651A	RR	S	GST	PCT	234 F	234 F	11	11/18/2011	5447	1.00	TRUE S		Thorpe.Miller	N/A
599	11651A	RR	S	GST	PCT	234 F	234 F	12	11/18/2011	5391	1.00	TRUE S		Thorpe.Miller	N/A
599	11651A	RR	S	GST	PCT	234 F	234 F	13	11/18/2011	5184	1.00	TRUE S		Thorpe.Miller	N/A
599	11651A	RR	S	GST	PCT	234 F	234 F	14	11/18/2011	5331	1.00	TRUE S		Thorpe.Miller	N/A
599	11651A	RR	S	GST	PCT	234 F	234 F	15	11/18/2011	5502	1.00	TRUE S		Thorpe.Miller	N/A
599	11651A	RR	S	GST	PCT	234 F	234 F	16	11/18/2011	5310	1.00	TRUE S		Thorpe.Miller	N/A
599	11651A	RR	S	GST	PCT	234 F	234 F	17	11/18/2011	5666	1.00	TRUE S		Thorpe.Miller	N/A
599	11651A	RR	S	GST	PCT	234 F	234 F	18	11/18/2011	5213	1.00	TRUE S		Thorpe.Miller	N/A
599	11651A	JC	S	GST	PCT	238 F	238 F	18	4/12/2012	5340	1.00	TRUE S		Thorpe.Miller	N/A
599	11651A	JC	S	GST	PCT	238 F	238 F	19	4/12/2012	5113	1.00	TRUE S		Thorpe.Miller	N/A
599	11651A	JC	S	GST	PCT	238 F	238 F	20	4/12/2012	5374	1.00	TRUE S		Thorpe.Miller	N/A
599	11651A	JC	S	GST	PCT	238 F	238 F	21	4/12/2012	5252	1.00	TRUE S		Thorpe.Miller	N/A
599	11651A	JC	S	GST	PCT	238 F	238 F	22	4/12/2012	5461	1.00	TRUE S		Thorpe.Miller	N/A
599	11651A	JC	S	GST	PCT	238 F	238 F	23	4/12/2012	5312	1.00	TRUE S		Thorpe.Miller	N/A
599	11651A	JC	S	GST	PCT	238 F	238 F	24	4/12/2012	5103	1.00	TRUE S		Thorpe.Miller	N/A
599	11651A	JC	S	GST	PCT	238 F	238 F	25	4/12/2012	5355	1.00	TRUE S		Thorpe.Miller	N/A
599	11651A	JC	S	GST	PCT	238 F	238 F	26	4/12/2012	5292	1.00	TRUE S		Thorpe.Miller	N/A
599	11651A	JC	S	GST	PCT	238 F	238 F	27	4/12/2012	5220	1.00	TRUE S		Thorpe.Miller	N/A
599	11651A	JC	S	GST	PCT	238 F	238 F	28	4/12/2012	5437	1.00	TRUE S		Thorpe.Miller	N/A
599	11651A	JC	S	GST	PCT	238 F	238 F	29	4/12/2012	5148	1.00	TRUE S		Thorpe.Miller	N/A
599	11651A	JC	S	GST	PCT	238 F	238 F	30	4/12/2012	5359	1.00	TRUE S		Thorpe.Miller	N/A
599	11651A	JC	S	GST	PCT	238 F	238 F	31	4/12/2012	5273	1.00	TRUE S		Thorpe.Miller	N/A
599	11651A	JC	S	GST	PCT	238 F	238 F	32	4/12/2012	5422	1.00	TRUE S		Thorpe.Miller	N/A
599	11651A	JC	S	GST	PCT	238 F	238 F	33	4/12/2012	5329	1.00	TRUE S		Thorpe.Miller	N/A
599	11651A	JC	S	GST	PCT	238 F	238 F	34	4/12/2012	5237	1.00	TRUE S		Thorpe.Miller	N/A
599	11651A	JC	S	GST	PCT	238 F	238 F	35	4/12/2012	5343	1.00	TRUE S		Thorpe.Miller	N/A
599	11651A	JC	S	GST	PCT	242 F	242 F	25	4/17/2012	5316	1.00	TRUE S		Thorpe.Miller	N/A
599	11651A	JC	S	GST	PCT	242 F	242 F	26	4/17/2012	5455	1.00	TRUE S		Thorpe.Miller	N/A
599	11651A	JC	S	GST	PCT	242 F	242 F	27	4/17/2012	5138	1.00	TRUE S		Thorpe.Miller	N/A
599	11651A	JC	S	GST	PCT	242 F	242 F	28	4/17/2012	5371	1.00	TRUE S		Thorpe.Miller	N/A
599	11651A	JC	S	GST	PCT	242 F	242 F	29	4/17/2012	5480	1.00	TRUE S		Thorpe.Miller	N/A
599	11651A	JC	S	GST	PCT	242 F	242 F	30	4/17/2012	5266	1.00	TRUE S		Thorpe.Miller	N/A
599	11651A	JC	S	GST	PCT	242 F	242 F	31	4/17/2012	5229	1.00	TRUE S		Thorpe.Miller	N/A
599	11651A	JC	S	GST	PCT	242 F	242 F	32	4/17/2012	5110	1.00	TRUE S		Thorpe.Miller	N/A
599	11651A	JC	S	GST	PCT	242 F	242 F	33	4/17/2012	5586	1.00	TRUE S		Thorpe.Miller	N/A
599	11651A	JC	S	GST	PCT	242 F	242 F	34	4/17/2012	5363	1.00	TRUE S		Thorpe.Miller	N/A

599 116S1A	JC	S	GST	PCT	242 F	35	4/17/2012	5236	1.00	TRUE S	Thorpe.Miller	N/A
599 116S1A	JC	S	GST	PCT	242 F	36	4/17/2012	5150	1.00	TRUE S	Thorpe.Miller	N/A
599 116S1A	JC	S	GST	PCT	242 F	37	4/17/2012	5194	1.00	TRUE S	Thorpe.Miller	N/A
599 116S1A	JC	S	GST	PCT	242 F	38	4/17/2012	5440	1.00	TRUE S	Thorpe.Miller	N/A
599 116S1A	JC	S	GST	PCT	242 F	39	4/17/2012	5219	1.00	TRUE S	Thorpe.Miller	N/A
599 116S1A	JC	S	GST	PCT	242 F	40	4/17/2012	5301	1.00	TRUE S	Thorpe.Miller	N/A
599 116S1A	JC	S	GST	PCT	242 F	41	4/17/2012	5175	1.00	TRUE S	Thorpe.Miller	N/A
599 116S1A	JC	S	GST	PCT	242 F	42	4/17/2012	5488	1.00	TRUE S	Thorpe.Miller	N/A
599 116S1A	JC	S	GST	PCT	242 F	5	5/22/2012	5831	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	302 F	6	5/22/2012	5945	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	302 F	7	5/22/2012	5796	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	302 F	8	5/22/2012	6003	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	302 F	9	5/22/2012	5781	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	302 F	10	5/22/2012	5847	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	302 F	11	5/22/2012	5955	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	302 F	12	5/22/2012	5720	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	302 F	13	5/22/2012	5874	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	302 F	14	5/22/2012	5613	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	302 F	15	5/22/2012	5701	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	302 F	16	5/22/2012	5863	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	302 F	17	5/22/2012	5911	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	302 F	18	5/22/2012	5734	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	302 F	19	5/22/2012	5950	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	302 F	20	5/22/2012	5863	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	302 F	21	5/22/2012	5701	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	302 F	22	5/22/2012	5822	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	302 F	11	5/31/2012	5107	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	304 F	12	5/31/2012	5033	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	304 F	13	5/31/2012	5266	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	304 F	14	5/31/2012	5119	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	304 F	15	5/31/2012	5270	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	304 F	16	5/31/2012	5099	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	304 F	17	5/31/2012	5221	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	304 F	18	5/31/2012	5319	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	304 F	19	5/31/2012	5001	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	304 F	20	5/31/2012	5177	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	304 F	21	5/31/2012	5306	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	304 F	22	5/31/2012	5100	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	304 F	23	5/31/2012	5061	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	304 F	24	5/31/2012	5421	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	304 F	25	5/31/2012	5393	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	304 F	26	5/31/2012	5803	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	304 F	27	5/31/2012	5150	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR	S	GST	PCT	304 F	28	5/31/2012	5241	1.00	TRUE S	Thorpe.Miller	N/A



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

TS 00373

Project Name Parcel C Trench Survey	PO Number N/A	LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section														
Project Location HUNTERS POINT	Project Number 4044-0002	LABORATORY ID																
Sampler Name Joe Cunningham	Airbill Number N/A																	
Project Chemist LISA BIENKOWSKI	Project Chemist Phone 949-756-7592																	
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	T	A	G	S	A	L	P	H	A	COMMENTS	LOCATION	SAMPLE ID	
02-PCT-238-018	4/12/2012	1000	1		S													
02-PCT-238-019	4/12/2012	1005	1		S													
02-PCT-238-020	4/12/2012	1010	1		S													
02-PCT-238-021	4/12/2012	1015	1		S													
02-PCT-238-022	4/12/2012	1020	1		S													
02-PCT-238-023	4/12/2012	1025	1		S													
02-PCT-238-024	4/12/2012	1030	1		S													
02-PCT-238-025	4/12/2012	1035	1		S													
02-PCT-238-026	4/12/2012	1040	1		S													
02-PCT-238-027	4/12/2012	1045	1		S													
02-PCT-238-028	4/12/2012	1050	1		S													
02-PCT-238-029	4/12/2012	1055	1		S													

Relinquished by: (signature) Company	Date 04/12/12	Received by: (signature) Company	LABORATORY INSTRUMENT COMMENTS	SAFETY COMMENTS
Relinquished by: (signature) Company	Time 1130	Received by: (signature) Company	COMPLETION DESCRIPTION	
Relinquished by: (signature) Company	Date	Received by: (signature) Company	SAMPLE CONDITION (e.g., sealed, unsealed, etc.)	
Relinquished by: (signature) Company	Time	Received by: (signature) Company	DATE/TIME/LOCATION (e.g., 4/12/12, 1130, 1000)	



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

TS 00374

Project Name Parcel C Trench Survey		PO Number N/A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section			
Project Location HUNTERS POINT		Project Number 4044-0002		LABORATORY ID					
Sampler Name Joe Cunningham		Airbill Number N/A							
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-758-7592							
SAMPLE ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	COMMENTS	LOCATION	SAMPLE ID
02-PCT-238-030	4/12/2012	1100	1		S	<input checked="" type="checkbox"/>			
02-PCT-238-031	4/12/2012	1105	1		S	<input checked="" type="checkbox"/>			
02-PCT-238-032	4/12/2012	1116	1		S	<input checked="" type="checkbox"/>			
02-PCT-238-033	4/12/2012	1115	1		S	<input checked="" type="checkbox"/>			
02-PCT-238-034	4/12/2012	1120	1		S	<input checked="" type="checkbox"/>			
02-PCT-238-035	4/12/2012	1125	1		S	<input checked="" type="checkbox"/>			

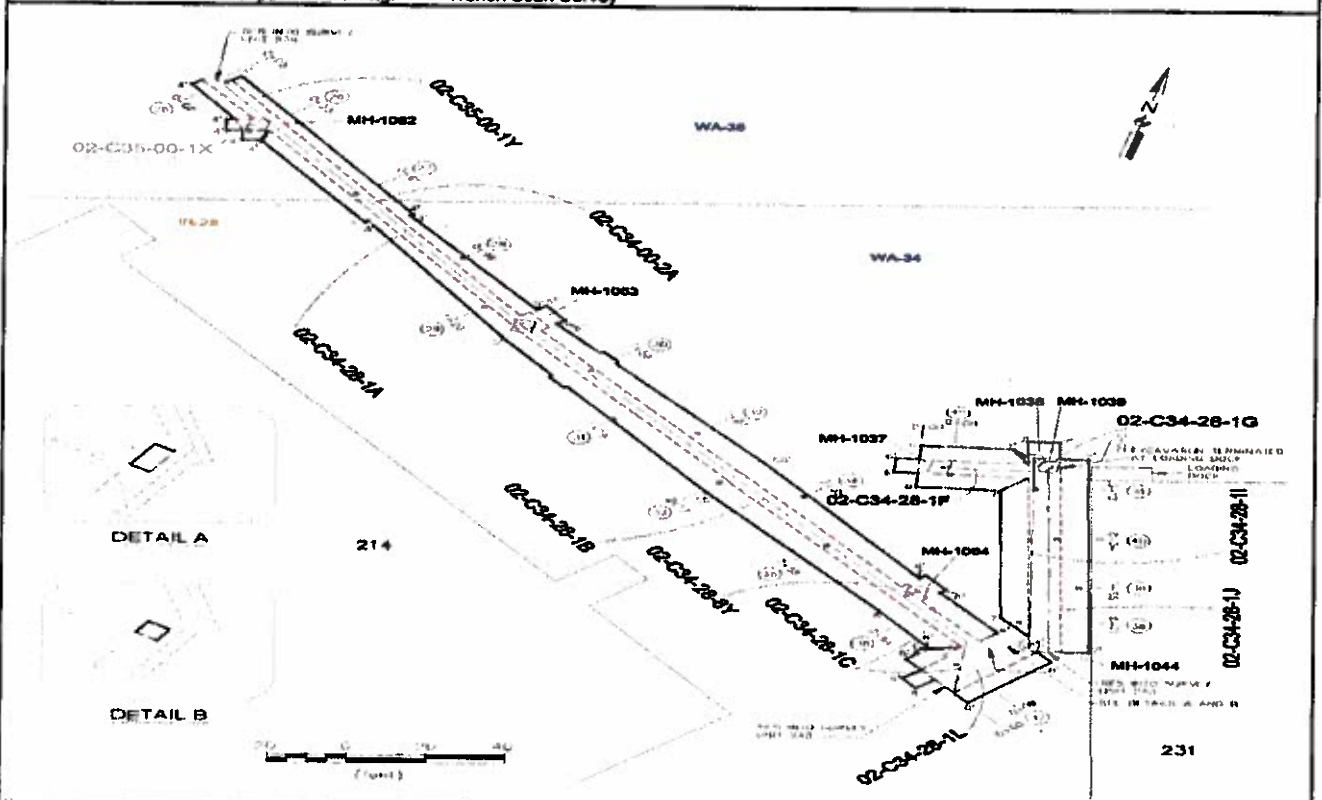
Relinquished by: (signature) <i>[Signature]</i>	Date 04/12/12	Received by: (signature) <i>[Signature]</i>	LABORATORY INSTRUCTIONS/COMMENTS	BANDING COMMENTS
Company JASAS	Time 1130	Company CET		
Relinquished by: (signature)	Date	Received by: (signature)	CONTAINER DESCRIPTION	
Company	Time	Company		
Relinquished by: (signature)	Date	Received by: (signature)	SAMPLE CONDITION FOR DELIVERY TO LABORATORY	
Company	Time	Company	TEMPERATURE: SAMPLE CONDITION: CONTAINER:	

RADIATION/CONTAMINATION SURVEY SUPPLEMENT

Date: 4/17/2012		Time: 10:00		INSTRUMENTATION USED				
		Model Inst/Det.	Serial Number	Calibration Due Date	Instrument % Efficiency	Total % Efficiency	MDC/MDA + (dpm/100cm ²)	Background + (dpm/100cm ²)
Survey Number: HPS-SU-242								
Location: Parcel C								
Surveyor: J. Cunningham								
Reviewed By: (Print & Sign)		2350-1 44-10	117563 215116	6/8/2012				

Isotopes of Concern: ²²⁶Ra ⁹⁰Sr ¹³⁷Cs

Description of drawing: Trench Scan Survey



Comments:

Scan range for 2350-1 Instrument is 3.73 - 7.67 Kcpm
 3 sigma investigation level for 2350-1 Instrument is 8028 cpm
 Picture is representative of material surveyed.

- denotes swipe location or fixed alpha/beta readings
- # denotes G/A radiation readings
- #/# denotes contact / 1 meter radiation readings
- * denotes highest radiation reading on contact
- LAW denotes large area mass/in wipe
- Δ denotes static location.
- + Unless Otherwise Noted
- All readings in μR/hr unless otherwise noted
- K = 1000

RADIATION/CONTAMINATION SURVEY SUPPLEMENT

SURVEY NUMBER: HPS-SU-242								
SURVEYOR: J. Cunningham					LOCATION: Parcel C			
Location	Exposure Rate (μ R/hr)		Gamma (cpm)	Fixed + Removable (NET)		Removable (NET)		Comments
	Contact	1 Meter		Alpha dpm/100cm ²	Beta/Gamma dpm/100cm ²	Alpha dpm/100cm ²	Beta/Gamma dpm/100cm ²	
25			5318					
26			5455					
27			5138					
28			5371					
29			5480					
30			5266					
31			5229					
32			5110					
33			5586					
34			5363					
35			5236					
36			5150					
37			5194					
38			5440					
39			5219					
40			5301					
41			5175					
42			5488					
Reviewer:							Date:	

2350ID	SurveyMaster	SurveyorInitials	SurveyType	Data Type	Bldg	SurveyUnit	Location	Room	Date Time	GammaCPM	CntTime	IsValid	LogMode	ImporterInitials	ImportDate
599 11651A	RR	RR	S	GST	PGT	234 F	1	1	11/18/2011	5133	1.00	TRUE S		Thorpe.Miller	N/A
599 11651A	RR	RR	S	GST	PGT	234 F	2	2	11/18/2011	5409	1.00	TRUE S		Thorpe.Miller	N/A
599 11651A	RR	RR	S	GST	PGT	234 F	3	3	11/18/2011	5501	1.00	TRUE S		Thorpe.Miller	N/A
599 11651A	RR	RR	S	GST	PGT	234 F	4	4	11/18/2011	5376	1.00	TRUE S		Thorpe.Miller	N/A
599 11651A	RR	RR	S	GST	PGT	234 F	5	5	11/18/2011	5280	1.00	TRUE S		Thorpe.Miller	N/A
599 11651A	RR	RR	S	GST	PGT	234 F	6	6	11/18/2011	5276	1.00	TRUE S		Thorpe.Miller	N/A
599 11651A	RR	RR	S	GST	PGT	234 F	7	7	11/18/2011	5603	1.00	TRUE S		Thorpe.Miller	N/A
599 11651A	RR	RR	S	GST	PGT	234 F	8	8	11/18/2011	5333	1.00	TRUE S		Thorpe.Miller	N/A
599 11651A	RR	RR	S	GST	PGT	234 F	9	9	11/18/2011	5270	1.00	TRUE S		Thorpe.Miller	N/A
599 11651A	RR	RR	S	GST	PGT	234 F	10	10	11/18/2011	5602	1.00	TRUE S		Thorpe.Miller	N/A
599 11651A	RR	RR	S	GST	PGT	234 F	11	11	11/18/2011	5447	1.00	TRUE S		Thorpe.Miller	N/A
599 11651A	RR	RR	S	GST	PGT	234 F	12	12	11/18/2011	5391	1.00	TRUE S		Thorpe.Miller	N/A
599 11651A	RR	RR	S	GST	PGT	234 F	13	13	11/18/2011	5184	1.00	TRUE S		Thorpe.Miller	N/A
599 11651A	RR	RR	S	GST	PGT	234 F	14	14	11/18/2011	5331	1.00	TRUE S		Thorpe.Miller	N/A
599 11651A	RR	RR	S	GST	PGT	234 F	15	15	11/18/2011	5502	1.00	TRUE S		Thorpe.Miller	N/A
599 11651A	RR	RR	S	GST	PGT	234 F	16	16	11/18/2011	5310	1.00	TRUE S		Thorpe.Miller	N/A
599 11651A	RR	RR	S	GST	PGT	234 F	17	17	11/18/2011	5666	1.00	TRUE S		Thorpe.Miller	N/A
599 11651A	RR	RR	S	GST	PGT	234 F	18	18	11/18/2011	5213	1.00	TRUE S		Thorpe.Miller	N/A
599 11651A	JC	JC	S	GST	PGT	238 F	18	18	4/12/2012	5340	1.00	TRUE S		Thorpe.Miller	N/A
599 11651A	JC	JC	S	GST	PGT	238 F	19	19	4/12/2012	5113	1.00	TRUE S		Thorpe.Miller	N/A
599 11651A	JC	JC	S	GST	PGT	238 F	20	20	4/12/2012	5374	1.00	TRUE S		Thorpe.Miller	N/A
599 11651A	JC	JC	S	GST	PGT	238 F	21	21	4/12/2012	5252	1.00	TRUE S		Thorpe.Miller	N/A
599 11651A	JC	JC	S	GST	PGT	238 F	22	22	4/12/2012	5461	1.00	TRUE S		Thorpe.Miller	N/A
599 11651A	JC	JC	S	GST	PGT	238 F	23	23	4/12/2012	5312	1.00	TRUE S		Thorpe.Miller	N/A
599 11651A	JC	JC	S	GST	PGT	238 F	24	24	4/12/2012	5103	1.00	TRUE S		Thorpe.Miller	N/A
599 11651A	JC	JC	S	GST	PGT	238 F	25	25	4/12/2012	5355	1.00	TRUE S		Thorpe.Miller	N/A
599 11651A	JC	JC	S	GST	PGT	238 F	26	26	4/12/2012	5292	1.00	TRUE S		Thorpe.Miller	N/A
599 11651A	JC	JC	S	GST	PGT	238 F	27	27	4/12/2012	5220	1.00	TRUE S		Thorpe.Miller	N/A
599 11651A	JC	JC	S	GST	PGT	238 F	28	28	4/12/2012	5437	1.00	TRUE S		Thorpe.Miller	N/A
599 11651A	JC	JC	S	GST	PGT	238 F	29	29	4/12/2012	5148	1.00	TRUE S		Thorpe.Miller	N/A
599 11651A	JC	JC	S	GST	PGT	238 F	30	30	4/12/2012	5359	1.00	TRUE S		Thorpe.Miller	N/A
599 11651A	JC	JC	S	GST	PGT	238 F	31	31	4/12/2012	5273	1.00	TRUE S		Thorpe.Miller	N/A
599 11651A	JC	JC	S	GST	PGT	238 F	32	32	4/12/2012	5422	1.00	TRUE S		Thorpe.Miller	N/A
599 11651A	JC	JC	S	GST	PGT	238 F	33	33	4/12/2012	5329	1.00	TRUE S		Thorpe.Miller	N/A
599 11651A	JC	JC	S	GST	PGT	238 F	34	34	4/12/2012	5237	1.00	TRUE S		Thorpe.Miller	N/A
599 11651A	JC	JC	S	GST	PGT	238 F	35	35	4/12/2012	5343	1.00	TRUE S		Thorpe.Miller	N/A
599 11651A	JC	3.873	S	GST	PGT	242 F	25	25	4/17/2012	5316	1.00	TRUE S		Thorpe.Miller	N/A
599 11651A	JC	2.075	S	GST	PGT	242 F	26	26	4/17/2012	5455	1.00	TRUE S		Thorpe.Miller	N/A
599 11651A	JC	0.5010	S	GST	PGT	242 F	27	27	4/17/2012	5138	1.00	TRUE S		Thorpe.Miller	N/A
599 11651A	JC	1.1658	S	GST	PGT	242 F	28	28	4/17/2012	5371	1.00	TRUE S		Thorpe.Miller	N/A
599 11651A	JC	2.004	S	GST	PGT	242 F	29	29	4/17/2012	5480	1.00	TRUE S		Thorpe.Miller	N/A
599 11651A	JC	2.063	S	GST	PGT	242 F	30	30	4/17/2012	5266	1.00	TRUE S		Thorpe.Miller	N/A
599 11651A	JC	2.1658	S	GST	PGT	242 F	31	31	4/17/2012	5229	1.00	TRUE S		Thorpe.Miller	N/A
599 11651A	JC	2.589	S	GST	PGT	242 F	32	32	4/17/2012	5110	1.00	TRUE S		Thorpe.Miller	N/A
599 11651A	JC	1.532	S	GST	PGT	242 F	33	33	4/17/2012	5586	1.00	TRUE S		Thorpe.Miller	N/A
599 11651A	JC	2.153	S	GST	PGT	242 F	34	34	4/17/2012	5363	1.00	TRUE S		Thorpe.Miller	N/A

599 116S1A	JC	2.251	S	GST	PCT		242 F	35		4/17/2012	5236	1.00	TRUE S	Thorpe.Miller	N/A
599 116S1A	JC	2.064	S	GST	PCT		242 F	36		4/17/2012	5150	1.00	TRUE S	Thorpe.Miller	N/A
599 116S1A	JC	0.4508	S	GST	PCT		242 F	37		4/17/2012	5194	1.00	TRUE S	Thorpe.Miller	N/A
599 116S1A	JC	1.959	S	GST	PCT		242 F	38		4/17/2012	5440	1.00	TRUE S	Thorpe.Miller	N/A
599 116S1A	JC	3.250	S	GST	PCT		242 F	39		4/17/2012	5219	1.00	TRUE S	Thorpe.Miller	N/A
599 116S1A	JC	1.316	S	GST	PCT		242 F	40		4/17/2012	5301	1.00	TRUE S	Thorpe.Miller	N/A
599 116S1A	JC	0.6316	S	GST	PCT		242 F	41		4/17/2012	5175	1.00	TRUE S	Thorpe.Miller	N/A
599 116S1A	JC	0.4126	S	GST	PCT		242 F	42		4/17/2012	5488	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR		S	GST	PCT		302 F	5		5/22/2012	5831	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR		S	GST	PCT		302 F	6		5/22/2012	5945	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR		S	GST	PCT		302 F	7		5/22/2012	5796	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR		S	GST	PCT		302 F	8		5/22/2012	6003	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR		S	GST	PCT		302 F	9		5/22/2012	5781	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR		S	GST	PCT		302 F	10		5/22/2012	5847	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR		S	GST	PCT		302 F	11		5/22/2012	5955	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR		S	GST	PCT		302 F	12		5/22/2012	5720	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR		S	GST	PCT		302 F	13		5/22/2012	5874	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR		S	GST	PCT		302 F	14		5/22/2012	5613	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR		S	GST	PCT		302 F	15		5/22/2012	5701	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR		S	GST	PCT		302 F	16		5/22/2012	5863	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR		S	GST	PCT		302 F	17		5/22/2012	5911	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR		S	GST	PCT		302 F	18		5/22/2012	5734	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR		S	GST	PCT		302 F	19		5/22/2012	5950	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR		S	GST	PCT		302 F	20		5/22/2012	5863	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR		S	GST	PCT		302 F	21		5/22/2012	5701	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR		S	GST	PCT		302 F	22		5/22/2012	5822	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR		S	GST	PCT		304 F	11		5/31/2012	5107	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR		S	GST	PCT		304 F	12		5/31/2012	5033	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR		S	GST	PCT		304 F	13		5/31/2012	5266	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR		S	GST	PCT		304 F	14		5/31/2012	5119	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR		S	GST	PCT		304 F	15		5/31/2012	5270	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR		S	GST	PCT		304 F	16		5/31/2012	5099	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR		S	GST	PCT		304 F	17		5/31/2012	5221	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR		S	GST	PCT		304 F	18		5/31/2012	5319	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR		S	GST	PCT		304 F	19		5/31/2012	5001	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR		S	GST	PCT		304 F	20		5/31/2012	5177	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR		S	GST	PCT		304 F	21		5/31/2012	5306	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR		S	GST	PCT		304 F	22		5/31/2012	5100	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR		S	GST	PCT		304 F	23		5/31/2012	5061	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR		S	GST	PCT		304 F	24		5/31/2012	5421	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR		S	GST	PCT		304 F	25		5/31/2012	5393	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR		S	GST	PCT		304 F	26		5/31/2012	5803	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR		S	GST	PCT		304 F	27		5/31/2012	5150	1.00	TRUE S	Thorpe.Miller	N/A
630 116S1A	RR		S	GST	PCT		304 F	28		5/31/2012	5241	1.00	TRUE S	Thorpe.Miller	N/A



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

TS 00375

Project Name Parcel C Trench Survey		PO Number N/A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section	
Project Location HUNTERS POINT		Project Number 4044-0002		LABORATORY ID #			
Sampler Name J. HERNANDEZ		Airbill Number N/A					
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592					
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	1	1
02-PCT-242-025	4/17/2012	1300	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
02-PCT-242-026	4/17/2012	1303	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
02-PCT-242-027	4/17/2012	1306	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
02-PCT-242-028	4/17/2012	1309	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
02-PCT-242-029	4/17/2012	1312	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
02-PCT-242-030	4/17/2012	1315	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
02-PCT-242-031	4/17/2012	1318	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
02-PCT-242-032	4/17/2012	1321	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
02-PCT-242-033	4/17/2012	1324	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
02-PCT-242-034	4/17/2012	1327	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
02-PCT-242-035	4/17/2012	1330	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
02-PCT-242-036	4/17/2012	1333	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
						COMMENTS	
						LOCATION	
						SAMPLE ID	

Relinquished by: (signature) [Signature]		Received by: (signature) [Signature]	
Company [Company]		Company C&T	
Relinquished by: (signature) [Signature]		Received by: (signature) [Signature]	
Company [Company]		Company [Company]	
Relinquished by: (signature) [Signature]		Received by: (signature) [Signature]	
Company [Company]		Company [Company]	
		LABORATORY INSTRUCTIONS/COMMENTS	
		SAMPLE CONDITION/INSTRUCTIONS/COMMENTS	



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

TS 00376

Page 1 of 1

Project Name Parcel C Trench Survey		PO Number N/A		A L P H A		LABORATORY NAME ONSITE - Curdis & Tomplins, LTD.		Project Information Section	
Project Location HUNTERS POINT		Project Number 4044-0002		M M A S P E C		LABORATORY ID			
Sampler Name T. Conningham		Altitude Number N/A		I I I I					
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-758-7592							
SAMPLE ID	DATE	TIME	Containers	LEVEL	TYPE	T A T	COMMENTS	LOCATION	SAMPLE ID
02-PCT-242-037	4/17/2012	1336	1		S1	<input checked="" type="checkbox"/>			
02-PCT-242-038	4/17/2012	1339	1		S1	<input checked="" type="checkbox"/>			
02-PCT-242-039	4/17/2012	1342	1		S1	<input checked="" type="checkbox"/>			
02-PCT-242-040	4/17/2012	1345	1		S1	<input checked="" type="checkbox"/>			
02-PCT-242-041	4/17/2012	1348	1		S1	<input checked="" type="checkbox"/>			
02-PCT-242-042	4/17/2012	1351	1		S1	<input checked="" type="checkbox"/>			

Relinquished by: (signature)	Date	Received by: (signature)
Company	Time	Company
Relinquished by: (signature)	Date	Received by: (signature)
Company	Time	Company
Relinquished by: (signature)	Date	Received by: (signature)
Company	Time	Company

LABORATORY INSTRUCTIONS/COMMENTS	EXAMINING COMMENTS
COMPOSITE DESCRIPTION	
EXAMINE CONDITION OF SAMPLE FOR LABORATORY TEMPERATURE. SAMPLE CONDITIONS: COOL, DRY, AND	

RADIATION/CONTAMINATION SURVEY SUPPLEMENT

Date: 5/22/2012		Time: 09:30		INSTRUMENTATION USED				
		Model Inst/Det.	Serial Number	Calibration Due Date	Instrument % Efficiency	Total % Efficiency	MDC/MDA + (dpm/100cm ²)	Background + (dpm/100cm ²)
Survey Number: HPS-SU-302								
Location: Parcel C								
Surveyor: R. Roberson								
Reviewed By: (Print & Sign)		2350-1 44-10	120588 81878	10/16/2012				
Isotopes of Concern: ²²⁶ Ra ⁹⁰ Sr ¹³⁷ Cs								
Description of drawing: Trench Scan Survey								
Comments: Scan range for 2350-1 Instrument is 2.77 - 5.98 Kcpm 3 sigma investigation level for 2350-1 Instrument is 7638 cpm Picture is representative of material surveyed.					denotes swipe location or fixed α/β readings # denotes G/A radiation readings #/# denotes contact / 1 meter radiation readings * denotes highest radiation reading on contact LAW denotes large area masslinn wipe Δ denotes static location. * Unless Otherwise Noted All readings in μR/hr unless otherwise noted K = 1000			

RADIATION/CONTAMINATION SURVEY SUPPLEMENT

SURVEY NUMBER: HPS-SU-302								
SURVEYOR: R. Roberson					LOCATION: Parcel C			
Location	Exposure Rate (μ R/hr)		Gamma (cpm)	Fixed + Removable (NET)		Removable (NET)		Comments
	Contact	1 Meter		Alpha dpm/100cm ²	Beta/Gamma dpm/100cm ²	Alpha dpm/100cm ²	Beta/Gamma dpm/100cm ²	
5			5831					
6			5945					
7			5796					
8			6003					
9			5781					
10			5847					
11			5955					
12			5720					
13			5874					
14			5613					
15			5701					
16			5863					
17			5911					
18			5734					
19			5950					
20			5863					
21			5701					
22			5822					
Reviewer:							Date:	

599	11651A	JC	S	GST	PCT	242 F	36	4/17/2012	5236	1.00	TRUE S	Thorpe.Miller	N/A
599	11651A	JC	S	GST	PCT	242 F	37	4/17/2012	5150	1.00	TRUE S	Thorpe.Miller	N/A
599	11651A	JC	S	GST	PCT	242 F	38	4/17/2012	5194	1.00	TRUE S	Thorpe.Miller	N/A
599	11651A	JC	S	GST	PCT	242 F	39	4/17/2012	5440	1.00	TRUE S	Thorpe.Miller	N/A
599	11651A	JC	S	GST	PCT	242 F	40	4/17/2012	5219	1.00	TRUE S	Thorpe.Miller	N/A
599	11651A	JC	S	GST	PCT	242 F	41	4/17/2012	5301	1.00	TRUE S	Thorpe.Miller	N/A
599	11651A	JC	S	GST	PCT	242 F	42	4/17/2012	5175	1.00	TRUE S	Thorpe.Miller	N/A
599	11651A	JC	S	GST	PCT	242 F	43	4/17/2012	5488	1.00	TRUE S	Thorpe.Miller	N/A
630	11651A	RR	S	GST	PCT	302 F	5	5/22/2012	5831	1.00	TRUE S	Thorpe.Miller	N/A
630	11651A	RR	S	GST	PCT	302 F	6	5/22/2012	5945	1.00	TRUE S	Thorpe.Miller	N/A
630	11651A	RR	S	GST	PCT	302 F	7	5/22/2012	5796	1.00	TRUE S	Thorpe.Miller	N/A
630	11651A	RR	S	GST	PCT	302 F	8	5/22/2012	6003	1.00	TRUE S	Thorpe.Miller	N/A
630	11651A	RR	S	GST	PCT	302 F	9	5/22/2012	5781	1.00	TRUE S	Thorpe.Miller	N/A
630	11651A	RR	S	GST	PCT	302 F	10	5/22/2012	5847	1.00	TRUE S	Thorpe.Miller	N/A
630	11651A	RR	S	GST	PCT	302 F	11	5/22/2012	5955	1.00	TRUE S	Thorpe.Miller	N/A
630	11651A	RR	S	GST	PCT	302 F	12	5/22/2012	5720	1.00	TRUE S	Thorpe.Miller	N/A
630	11651A	RR	S	GST	PCT	302 F	13	5/22/2012	5874	1.00	TRUE S	Thorpe.Miller	N/A
630	11651A	RR	S	GST	PCT	302 F	14	5/22/2012	5613	1.00	TRUE S	Thorpe.Miller	N/A
630	11651A	RR	S	GST	PCT	302 F	15	5/22/2012	5701	1.00	TRUE S	Thorpe.Miller	N/A
630	11651A	RR	S	GST	PCT	302 F	16	5/22/2012	5863	1.00	TRUE S	Thorpe.Miller	N/A
630	11651A	RR	S	GST	PCT	302 F	17	5/22/2012	5911	1.00	TRUE S	Thorpe.Miller	N/A
630	11651A	RR	S	GST	PCT	302 F	18	5/22/2012	5734	1.00	TRUE S	Thorpe.Miller	N/A
630	11651A	RR	S	GST	PCT	302 F	19	5/22/2012	5950	1.00	TRUE S	Thorpe.Miller	N/A
630	11651A	RR	S	GST	PCT	302 F	20	5/22/2012	5863	1.00	TRUE S	Thorpe.Miller	N/A
630	11651A	RR	S	GST	PCT	302 F	21	5/22/2012	5701	1.00	TRUE S	Thorpe.Miller	N/A
630	11651A	RR	S	GST	PCT	302 F	22	5/22/2012	5822	1.00	TRUE S	Thorpe.Miller	N/A
630	11651A	RR	S	GST	PCT	304 F	11	5/31/2012	5107	1.00	TRUE S	Thorpe.Miller	N/A
630	11651A	RR	S	GST	PCT	304 F	12	5/31/2012	5033	1.00	TRUE S	Thorpe.Miller	N/A
630	11651A	RR	S	GST	PCT	304 F	13	5/31/2012	5266	1.00	TRUE S	Thorpe.Miller	N/A
630	11651A	RR	S	GST	PCT	304 F	14	5/31/2012	5119	1.00	TRUE S	Thorpe.Miller	N/A
630	11651A	RR	S	GST	PCT	304 F	15	5/31/2012	5270	1.00	TRUE S	Thorpe.Miller	N/A
630	11651A	RR	S	GST	PCT	304 F	16	5/31/2012	5099	1.00	TRUE S	Thorpe.Miller	N/A
630	11651A	RR	S	GST	PCT	304 F	17	5/31/2012	5221	1.00	TRUE S	Thorpe.Miller	N/A
630	11651A	RR	S	GST	PCT	304 F	18	5/31/2012	5319	1.00	TRUE S	Thorpe.Miller	N/A
630	11651A	RR	S	GST	PCT	304 F	19	5/31/2012	5001	1.00	TRUE S	Thorpe.Miller	N/A
630	11651A	RR	S	GST	PCT	304 F	20	5/31/2012	5177	1.00	TRUE S	Thorpe.Miller	N/A
630	11651A	RR	S	GST	PCT	304 F	21	5/31/2012	5306	1.00	TRUE S	Thorpe.Miller	N/A
630	11651A	RR	S	GST	PCT	304 F	22	5/31/2012	5100	1.00	TRUE S	Thorpe.Miller	N/A
630	11651A	RR	S	GST	PCT	304 F	23	5/31/2012	5061	1.00	TRUE S	Thorpe.Miller	N/A
630	11651A	RR	S	GST	PCT	304 F	24	5/31/2012	5421	1.00	TRUE S	Thorpe.Miller	N/A
630	11651A	RR	S	GST	PCT	304 F	25	5/31/2012	5393	1.00	TRUE S	Thorpe.Miller	N/A
630	11651A	RR	S	GST	PCT	304 F	26	5/31/2012	5803	1.00	TRUE S	Thorpe.Miller	N/A
630	11651A	RR	S	GST	PCT	304 F	27	5/31/2012	5150	1.00	TRUE S	Thorpe.Miller	N/A
630	11651A	RR	S	GST	PCT	304 F	28	5/31/2012	5241	1.00	TRUE S	Thorpe.Miller	N/A

2350ID	SurveyMaterial	SurveyorInitials	SurveyType	Data Type	Bldg	SurveyUnit	Location	RdgNum	Date Time	GammaCPM	CntTime	IsValid	LogMode	ImporterInitials	ImportDate
599	116S1A	RR	S	GST	PCT	234 F	234 F	1	11/18/2011	5133	1.00	TRUE S		Thorpe.Miller	N/A
599	116S1A	RR	S	GST	PCT	234 F	234 F	2	11/18/2011	5409	1.00	TRUE S		Thorpe.Miller	N/A
599	116S1A	RR	S	GST	PCT	234 F	234 F	3	11/18/2011	5501	1.00	TRUE S		Thorpe.Miller	N/A
599	116S1A	RR	S	GST	PCT	234 F	234 F	4	11/18/2011	5376	1.00	TRUE S		Thorpe.Miller	N/A
599	116S1A	RR	S	GST	PCT	234 F	234 F	5	11/18/2011	5280	1.00	TRUE S		Thorpe.Miller	N/A
599	116S1A	RR	S	GST	PCT	234 F	234 F	6	11/18/2011	5276	1.00	TRUE S		Thorpe.Miller	N/A
599	116S1A	RR	S	GST	PCT	234 F	234 F	7	11/18/2011	5603	1.00	TRUE S		Thorpe.Miller	N/A
599	116S1A	RR	S	GST	PCT	234 F	234 F	8	11/18/2011	5333	1.00	TRUE S		Thorpe.Miller	N/A
599	116S1A	RR	S	GST	PCT	234 F	234 F	9	11/18/2011	5270	1.00	TRUE S		Thorpe.Miller	N/A
599	116S1A	RR	S	GST	PCT	234 F	234 F	10	11/18/2011	5602	1.00	TRUE S		Thorpe.Miller	N/A
599	116S1A	RR	S	GST	PCT	234 F	234 F	11	11/18/2011	5447	1.00	TRUE S		Thorpe.Miller	N/A
599	116S1A	RR	S	GST	PCT	234 F	234 F	12	11/18/2011	5391	1.00	TRUE S		Thorpe.Miller	N/A
599	116S1A	RR	S	GST	PCT	234 F	234 F	13	11/18/2011	5184	1.00	TRUE S		Thorpe.Miller	N/A
599	116S1A	RR	S	GST	PCT	234 F	234 F	14	11/18/2011	5331	1.00	TRUE S		Thorpe.Miller	N/A
599	116S1A	RR	S	GST	PCT	234 F	234 F	15	11/18/2011	5502	1.00	TRUE S		Thorpe.Miller	N/A
599	116S1A	RR	S	GST	PCT	234 F	234 F	16	11/18/2011	5310	1.00	TRUE S		Thorpe.Miller	N/A
599	116S1A	RR	S	GST	PCT	234 F	234 F	17	11/18/2011	5666	1.00	TRUE S		Thorpe.Miller	N/A
599	116S1A	RR	S	GST	PCT	234 F	234 F	18	11/18/2011	5213	1.00	TRUE S		Thorpe.Miller	N/A
599	116S1A	JC	S	GST	PCT	238 F	238 F	18	4/12/2012	5340	1.00	TRUE S		Thorpe.Miller	N/A
599	116S1A	JC	S	GST	PCT	238 F	238 F	19	4/12/2012	5113	1.00	TRUE S		Thorpe.Miller	N/A
599	116S1A	JC	S	GST	PCT	238 F	238 F	20	4/12/2012	5374	1.00	TRUE S		Thorpe.Miller	N/A
599	116S1A	JC	S	GST	PCT	238 F	238 F	21	4/12/2012	5252	1.00	TRUE S		Thorpe.Miller	N/A
599	116S1A	JC	S	GST	PCT	238 F	238 F	22	4/12/2012	5461	1.00	TRUE S		Thorpe.Miller	N/A
599	116S1A	JC	S	GST	PCT	238 F	238 F	23	4/12/2012	5312	1.00	TRUE S		Thorpe.Miller	N/A
599	116S1A	JC	S	GST	PCT	238 F	238 F	24	4/12/2012	5103	1.00	TRUE S		Thorpe.Miller	N/A
599	116S1A	JC	S	GST	PCT	238 F	238 F	25	4/12/2012	5355	1.00	TRUE S		Thorpe.Miller	N/A
599	116S1A	JC	S	GST	PCT	238 F	238 F	26	4/12/2012	5292	1.00	TRUE S		Thorpe.Miller	N/A
599	116S1A	JC	S	GST	PCT	238 F	238 F	27	4/12/2012	5220	1.00	TRUE S		Thorpe.Miller	N/A
599	116S1A	JC	S	GST	PCT	238 F	238 F	28	4/12/2012	5437	1.00	TRUE S		Thorpe.Miller	N/A
599	116S1A	JC	S	GST	PCT	238 F	238 F	29	4/12/2012	5148	1.00	TRUE S		Thorpe.Miller	N/A
599	116S1A	JC	S	GST	PCT	238 F	238 F	30	4/12/2012	5359	1.00	TRUE S		Thorpe.Miller	N/A
599	116S1A	JC	S	GST	PCT	238 F	238 F	31	4/12/2012	5273	1.00	TRUE S		Thorpe.Miller	N/A
599	116S1A	JC	S	GST	PCT	238 F	238 F	32	4/12/2012	5422	1.00	TRUE S		Thorpe.Miller	N/A
599	116S1A	JC	S	GST	PCT	238 F	238 F	33	4/12/2012	5329	1.00	TRUE S		Thorpe.Miller	N/A
599	116S1A	JC	S	GST	PCT	238 F	238 F	34	4/12/2012	5237	1.00	TRUE S		Thorpe.Miller	N/A
599	116S1A	JC	S	GST	PCT	238 F	238 F	35	4/12/2012	5343	1.00	TRUE S		Thorpe.Miller	N/A
599	116S1A	JC	S	GST	PCT	242 F	242 F	25	4/17/2012	5316	1.00	TRUE S		Thorpe.Miller	N/A
599	116S1A	JC	S	GST	PCT	242 F	242 F	26	4/17/2012	5455	1.00	TRUE S		Thorpe.Miller	N/A
599	116S1A	JC	S	GST	PCT	242 F	242 F	27	4/17/2012	5138	1.00	TRUE S		Thorpe.Miller	N/A
599	116S1A	JC	S	GST	PCT	242 F	242 F	28	4/17/2012	5371	1.00	TRUE S		Thorpe.Miller	N/A
599	116S1A	JC	S	GST	PCT	242 F	242 F	29	4/17/2012	5480	1.00	TRUE S		Thorpe.Miller	N/A
599	116S1A	JC	S	GST	PCT	242 F	242 F	30	4/17/2012	5266	1.00	TRUE S		Thorpe.Miller	N/A
599	116S1A	JC	S	GST	PCT	242 F	242 F	31	4/17/2012	5229	1.00	TRUE S		Thorpe.Miller	N/A
599	116S1A	JC	S	GST	PCT	242 F	242 F	32	4/17/2012	5110	1.00	TRUE S		Thorpe.Miller	N/A
599	116S1A	JC	S	GST	PCT	242 F	242 F	33	4/17/2012	5586	1.00	TRUE S		Thorpe.Miller	N/A
599	116S1A	JC	S	GST	PCT	242 F	242 F	34	4/17/2012	5363	1.00	TRUE S		Thorpe.Miller	N/A



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

TS 00383

Project Name: Parcel C Trench Survey		PO Number		N/A		Project Information		
Project Location HUNTERS POINT		Project Number		4044-0002		Section		
Sampler Name <i>J. Bienkowski</i>		Airbill Number		N/A		LABORATORY NAME ONSITE - Curtis & Tomplins, LTD.		
Project Chemist LISA BIENKOWSKI		Project Chemist Phone		949-756-7592		LABORATORY ID		
SAMPLE ID	DATE	TIME	Containers	LEVEL	TYPE	COMMENTS	LOCATION	SAMPLE ID
02-FCT-302-005	5/22/2012	1000	1		S1			
02-FCT-302-006	5/22/2012	1003	1		S1			
02-FCT-302-007	5/22/2012	1006	1		S1			
02-FCT-302-008	5/22/2012	1009	1		S1			
02-FCT-302-009	5/22/2012	1012	1		S1			
02-FCT-302-010	5/22/2012	1015	1		S1			
02-PCT-302-011	5/22/2012	1018	1		S1	DUP		
02-PCT-302-012	5/22/2012	1021	1		S1			
02-PCT-302-013	5/22/2012	1024	1		S1			
02-PCT-302-014	5/22/2012	1027	1		S1			
02-FCT-302-015	5/22/2012	1030	1		S1			
02-PCT-302-016	5/22/2012	1033	1		S1			

Relinquished by: (signature) <i>[Signature]</i>	Date 5-22-12	Received by: (signature) <i>[Signature]</i>	Company CET
Relinquished by: (signature) <i>[Signature]</i>	Time 14:15	Received by: (signature) <i>[Signature]</i>	Company CET
Relinquished by: (signature)	Date	Received by: (signature)	Company
Relinquished by: (signature)	Time	Received by: (signature)	Company
Relinquished by: (signature)	Date	Received by: (signature)	Company
Relinquished by: (signature)	Time	Received by: (signature)	Company

LABORATORY INSTRUCTIONS/COMMENTS

COMPOSITE DISPOSITION

SAMPLE CONDITION (FOR LABORATORY)

TEMPERATURE, SAMPLE CONDITION, COOLER SET

SAMPLING COMMENTS



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

TS 00384

Page 1 of 1

Project Name Parcel C Trench Survey		PO Number N/A		LABORATORY NAME ONSITE - Curdis & Tompkins, LTD.		Project Information Section			
Project Location HUNTERS POINT		Project Number 4044-0002		LABORATORY ID [REDACTED]					
Sampler Name J. Cummings		Airbill Number N/A							
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592							
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	TA	COMMENTS	LOCATION	SAMPLE ID
02-PCT-302-017	5/22/2012	1036	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
02-PCT-302-018	5/22/2012	1039	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
02-PCT-302-019	5/22/2012	1042	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
02-PCT-302-020	5/22/2012	1045	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
02-PCT-302-021	5/22/2012	1048	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
02-PCT-302-022	5/22/2012	1057	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

Relinquished by: (signature) [Signature]		Date 5-22-12		Received by: (signature) [Signature]	
Company Tetra Tech		Time 14:15		Company CT	
Relinquished by: (signature)		Date		Received by: (signature)	
Company		Time		Company	
Relinquished by: (signature)		Date		Received by: (signature)	
Company		Time		Company	

LABORATORY/INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS	
COMPOSITE DESCRIPTION			
SAMPLE CONDITION (FOR RECEIPT FOR LABORATORY)			
TEMPERATURES - SAMPLE CONDITION - COVER SEAL			

TU 302

Located in Parcel C

05/08/12: Issued drawing to identify locations for investigative sample collection (1-4)

05/09/12: Performed walkover survey to identify scan range

05/09/12: Collected 4 investigative samples (1-4)

05/17/12: No activity above the release criteria was identified in the investigative samples (1-4)

05/17/12: Issued drawing to identify locations for systematic sample collection (5-22)

05/22/12: Collected 18 systematic samples (5-22)

05/28/12: No activity above the release criteria was identified

05/31/12: Issued Figures 1-1/3-1 for Internal Draft SUPR

07/10/12: The RSO provided the RASO with the Internal Draft SUPR and requested for concurrence to backfill.

07/12/12: RASO concurs on backfilling the trench

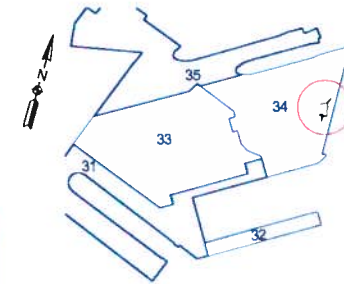
07/16/12: Backfilling initiated with 48 cubic yards of Mills Peninsula import soils

07/17/12: Backfilling continued with 432 cubic yards of Mills Peninsula import soils

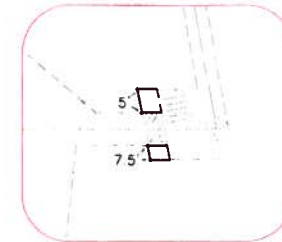
07/18/12: Backfilling completed with 144 cubic yards of Mills Peninsula import soils

08/07/12: CBD used Engineer's volume estimate of 550 cubic yards backfilled instead of field estimate of 624 cubic yards.

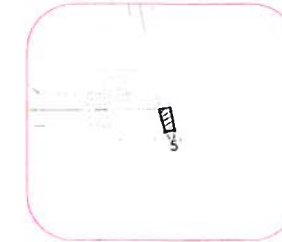
PROCEED WITH SAMPLING



KEY PLAN

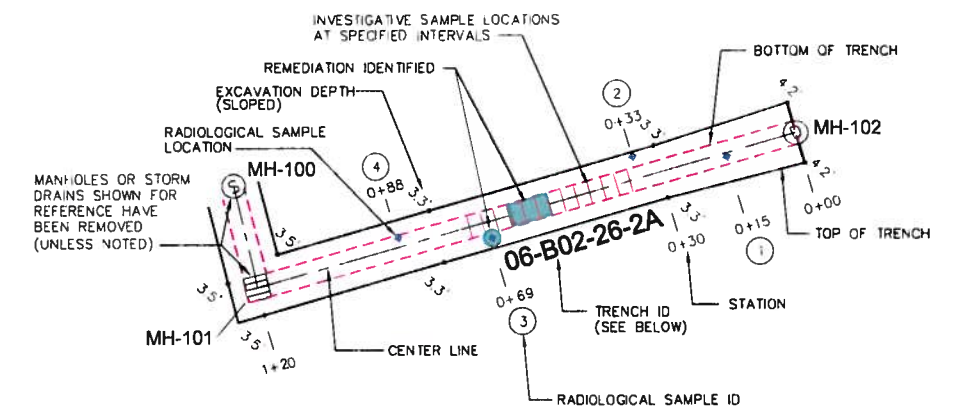


DETAIL A

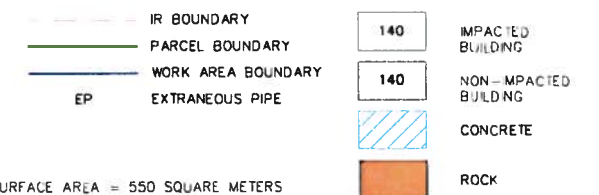
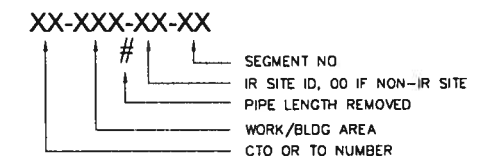


DETAIL B

LEGEND



TRENCH ID



SURFACE AREA = 550 SQUARE METERS
TOTAL LENGTH OF TRENCH = 368 L.F.
TOTAL LENGTH OF PIPE = 428 L.F.
BACKFILL QUANTITY = 618 CUBIC YARDS

BASE REALIGNMENT AND CLOSURE
PROGRAM MANAGEMENT OFFICE WEST
SAN DIEGO, CALIFORNIA

PARCEL C
SURVEY UNIT 302, AREA 34

HUNTERS POINT NAVAL SHIPYARD, SAN FRANCISCO, CA

REVISION: -
AUTHOR: DMACK
PROJECT NO:
FILE: SEE BELOW



20 0 20 40
(feet)

SYSTEMATIC SAMPLES 5-22

Area	Survey Unit	Sample Point	Sample Type	Sample ID	Date Collected	COC Radiological Technician
E11	693	9	Systematic	04-PE-E0693-09	24-Apr-12	Anthony Smith
E11	693	10	Systematic	04-PE-E0693-10	24-Apr-12	Anthony Smith
E11	693	11	Systematic	04-PE-E0693-11	24-Apr-12	Anthony Smith
E11	693	12	Systematic	04-PE-E0693-12	24-Apr-12	Anthony Smith
E11	693	13	Systematic	04-PE-E0693-13	24-Apr-12	Anthony Smith
E11	693	14	Systematic	04-PE-E0693-14	24-Apr-12	Anthony Smith
E11	693	15	Systematic	04-PE-E0693-15	24-Apr-12	Anthony Smith
E11	693	16	Systematic	04-PE-E0693-16	24-Apr-12	Anthony Smith
E11	693	17	Systematic	04-PE-E0693-17	24-Apr-12	Anthony Smith
E11	693	18	Systematic	04-PE-E0693-18	24-Apr-12	Anthony Smith
E11	693	19	Systematic	04-PE-E0693-19	24-Apr-12	Anthony Smith
E11	693	20	Systematic	04-PE-E0693-20	24-Apr-12	Anthony Smith
E11	693	21	Systematic	04-PE-E0693-21	24-Apr-12	Anthony Smith
E11	693	22	Systematic	04-PE-E0693-22	24-Apr-12	Anthony Smith
E11	693	23	Systematic	04-PE-E0693-23	24-Apr-12	Anthony Smith
E11	693	24	Systematic	04-PE-E0693-24	24-Apr-12	Anthony Smith
E11	693	25	Systematic	04-PE-E0693-25	24-Apr-12	Anthony Smith

On-Site Laboratory (pCi/g)

K-40	Ra-226	Cs-137	Bi-214	Pb-214
10.92	0.4133	0.01087	0.3187	0.503
10.31	1.338	0.01523	0.4785	0.5214
10.72	0.4259	0.01231	0.3547	0.4473
10.61	0.6146	0.02235	0.3334	0.5176
11.38	0.5131	0.01199	0.5798	0.6619
12.17	0.5977	0.001776	0.4368	0.7337
7.931	1.037	0.006561	0.7728	0.8283
7.963	0.7701	0.002913	0.578	0.6613
10	0.8577	0.01198	0.5866	0.6778
11.28	0.9163	0.01309	0.6664	0.7133
13.53	0.8076	0.01283	0.5062	0.6525
10.37	1.266	0.007697	0.7124	0.7932
8.877	1.009	-0.008686	0.63	0.6624
10.51	0.3598	0.01141	0.5688	0.6172
8.058	0.7641	-0.002274	0.649	0.7244
9.748	0.6598	0.01433	0.4658	0.5373
10.48	0.976	0.003956	0.3183	0.5567

Off-Site Laboratory (pCi/g)

K-40	Ra-226	Cs-137	Bi-214	Pb-214

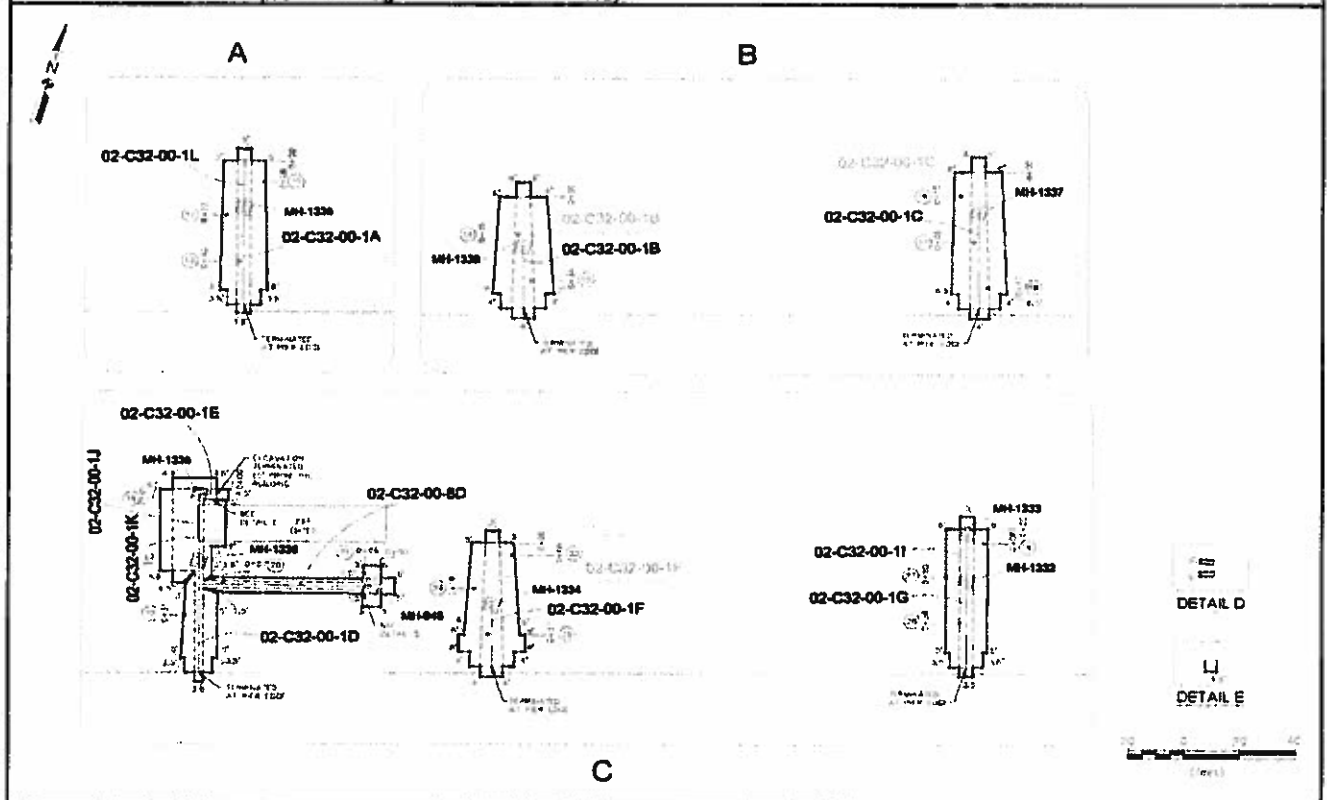
Highlighted Activities: K-40 ≤ 3.0 ; Ra-226 ≥ 1.485 (On-site) & 1.625 (Off-site) ; Cs-137 ≥ 0.113 ; Bi-214 ≥ 1.485 ; Pb-214 ≥ 1.485 (pCi/g)

RADIATION/CONTAMINATION SURVEY SUPPLEMENT

Date: 5/31/2012	Time: 12:40	INSTRUMENTATION USED					
		Model Inst/Det.	Serial Number	Calibration Due Date	Instrument % Efficiency	Total % Efficiency	MDC/MDA + (dpm/100cm ²)
Survey Number: HPS-SU-304							
Location: Parcel C							
Surveyor: R. Roberson							
Reviewed By: (Print & Sign)		2350-1 44-10	120588 81878	10/16/2012			

Isotopes of Concern: ²²⁶Ra ⁹⁰Sr ¹³⁷Cs

Description of drawing: Trench Scan Survey



<p>Comments:</p> <p>Scan range for 2350-1 Instrument is 3.28 - 5.85 Kcpm</p> <p>3 sigma investigation level for 2350-1 Instrument is 7638 cpm</p> <p>Picture is representative of material surveyed.</p>	<p>denotes swipe location or fixed α/β readings</p> <p># denotes G/A radiation readings</p> <p># / # denotes contact / 1 meter radiation readings.</p> <p>• denotes highest radiation reading on contact</p> <p>LAW denotes large area masslinn wipe</p> <p>Δ denotes static location.</p> <p>• Unless Otherwise Noted</p> <p>All readings in μR/hr unless otherwise noted</p> <p>K = 1000</p>
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RADIATION/CONTAMINATION SURVEY SUPPLEMENT

SURVEY NUMBER: HPS-SU-304								
SURVEYOR: R. Roberson				LOCATION: Parcel C				
Location	Exposure Rate (μ R/hr)		Gamma (cpm)	Fixed + Removable (NET)		Removable (NET)		Comments
	Contact	1 Meter		Alpha dpm/100cm ²	Beta/Gamma dpm/100cm ²	Alpha dpm/100cm ²	Beta/Gamma dpm/100cm ²	
11			5107					
12			5033					
13			5266					
14			5119					
15			5270					
16			5099					
17			5221					
18			5319					
19			5001					
20			5177					
21			5306					
22			5100					
23			5061					
24			5421					
25			5393					
26			5803					
27			5150					
28			5241					
Reviewer:							Date:	

599 11651A	JC	S	GST	PCT	242 F	36	4/17/2012	5150	1.00	TRUE S	Thorpe, Miller	N/A
599 11651A	JC	S	GST	PCT	242 F	37	4/17/2012	5194	1.00	TRUE S	Thorpe, Miller	N/A
599 11651A	JC	S	GST	PCT	242 F	38	4/17/2012	5440	1.00	TRUE S	Thorpe, Miller	N/A
599 11651A	JC	S	GST	PCT	242 F	39	4/17/2012	5219	1.00	TRUE S	Thorpe, Miller	N/A
599 11651A	JC	S	GST	PCT	242 F	40	4/17/2012	5301	1.00	TRUE S	Thorpe, Miller	N/A
599 11651A	JC	S	GST	PCT	242 F	41	4/17/2012	5175	1.00	TRUE S	Thorpe, Miller	N/A
599 11651A	JC	S	GST	PCT	242 F	42	4/17/2012	5488	1.00	TRUE S	Thorpe, Miller	N/A
630 11651A	RR	S	GST	PCT	302 F	5	5/22/2012	5831	1.00	TRUE S	Thorpe, Miller	N/A
630 11651A	RR	S	GST	PCT	302 F	6	5/22/2012	5945	1.00	TRUE S	Thorpe, Miller	N/A
630 11651A	RR	S	GST	PCT	302 F	7	5/22/2012	5796	1.00	TRUE S	Thorpe, Miller	N/A
630 11651A	RR	S	GST	PCT	302 F	8	5/22/2012	6003	1.00	TRUE S	Thorpe, Miller	N/A
630 11651A	RR	S	GST	PCT	302 F	9	5/22/2012	5781	1.00	TRUE S	Thorpe, Miller	N/A
630 11651A	RR	S	GST	PCT	302 F	10	5/22/2012	5847	1.00	TRUE S	Thorpe, Miller	N/A
630 11651A	RR	S	GST	PCT	302 F	11	5/22/2012	5955	1.00	TRUE S	Thorpe, Miller	N/A
630 11651A	RR	S	GST	PCT	302 F	12	5/22/2012	5720	1.00	TRUE S	Thorpe, Miller	N/A
630 11651A	RR	S	GST	PCT	302 F	13	5/22/2012	5874	1.00	TRUE S	Thorpe, Miller	N/A
630 11651A	RR	S	GST	PCT	302 F	14	5/22/2012	5613	1.00	TRUE S	Thorpe, Miller	N/A
630 11651A	RR	S	GST	PCT	302 F	15	5/22/2012	5701	1.00	TRUE S	Thorpe, Miller	N/A
630 11651A	RR	S	GST	PCT	302 F	16	5/22/2012	5863	1.00	TRUE S	Thorpe, Miller	N/A
630 11651A	RR	S	GST	PCT	302 F	17	5/22/2012	5911	1.00	TRUE S	Thorpe, Miller	N/A
630 11651A	RR	S	GST	PCT	302 F	18	5/22/2012	5734	1.00	TRUE S	Thorpe, Miller	N/A
630 11651A	RR	S	GST	PCT	302 F	19	5/22/2012	5950	1.00	TRUE S	Thorpe, Miller	N/A
630 11651A	RR	S	GST	PCT	302 F	20	5/22/2012	5863	1.00	TRUE S	Thorpe, Miller	N/A
630 11651A	RR	S	GST	PCT	302 F	21	5/22/2012	5701	1.00	TRUE S	Thorpe, Miller	N/A
630 11651A	RR	S	GST	PCT	302 F	22	5/22/2012	5822	1.00	TRUE S	Thorpe, Miller	N/A
630 11651A	RR	S	GST	PCT	304 F	11	5/31/2012	5107	1.00	TRUE S	Thorpe, Miller	N/A
630 11651A	RR	S	GST	PCT	304 F	12	5/31/2012	5033	1.00	TRUE S	Thorpe, Miller	N/A
630 11651A	RR	S	GST	PCT	304 F	13	5/31/2012	5266	1.00	TRUE S	Thorpe, Miller	N/A
630 11651A	RR	S	GST	PCT	304 F	14	5/31/2012	5119	1.00	TRUE S	Thorpe, Miller	N/A
630 11651A	RR	S	GST	PCT	304 F	15	5/31/2012	5270	1.00	TRUE S	Thorpe, Miller	N/A
630 11651A	RR	S	GST	PCT	304 F	16	5/31/2012	5099	1.00	TRUE S	Thorpe, Miller	N/A
630 11651A	RR	S	GST	PCT	304 F	17	5/31/2012	5221	1.00	TRUE S	Thorpe, Miller	N/A
630 11651A	RR	S	GST	PCT	304 F	18	5/31/2012	5319	1.00	TRUE S	Thorpe, Miller	N/A
630 11651A	RR	S	GST	PCT	304 F	19	5/31/2012	5001	1.00	TRUE S	Thorpe, Miller	N/A
630 11651A	RR	S	GST	PCT	304 F	20	5/31/2012	5177	1.00	TRUE S	Thorpe, Miller	N/A
630 11651A	RR	S	GST	PCT	304 F	21	5/31/2012	5306	1.00	TRUE S	Thorpe, Miller	N/A
630 11651A	RR	S	GST	PCT	304 F	22	5/31/2012	5100	1.00	TRUE S	Thorpe, Miller	N/A
630 11651A	RR	S	GST	PCT	304 F	23	5/31/2012	5061	1.00	TRUE S	Thorpe, Miller	N/A
630 11651A	RR	S	GST	PCT	304 F	24	5/31/2012	5421	1.00	TRUE S	Thorpe, Miller	N/A
630 11651A	RR	S	GST	PCT	304 F	25	5/31/2012	5393	1.00	TRUE S	Thorpe, Miller	N/A
630 11651A	RR	S	GST	PCT	304 F	26	5/31/2012	5803	1.00	TRUE S	Thorpe, Miller	N/A
630 11651A	RR	S	GST	PCT	304 F	27	5/31/2012	5150	1.00	TRUE S	Thorpe, Miller	N/A
630 11651A	RR	S	GST	PCT	304 F	28	5/31/2012	5241	1.00	TRUE S	Thorpe, Miller	N/A



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

TSI 00591

Project Name Parcel C Trench Survey		PO Number N/A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section	
Project Location HUNTERS POINT		Project Number 4044-0002		LABORATORY NUMBER			
Sampler Name J. C. [Signature]		Airbill Number N/A					
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592					
SAMPLE_ID	DATE	TIME	Containers	LEVEL	TYPE	COMMENTS	SAMPLE ID
02-PCT-304-001	5/21/2012	1100	1		S1		
02-PCT-304-002	5/21/2012	1103	1		S1		
02-PCT-304-003	5/21/2012	1106	1		S1		
02-PCT-304-004	5/21/2012	1109	1		S1		
02-PCT-304-005	5/21/2012	1112	1		S1		
02-PCT-304-006	5/21/2012	1115	1		S1		
02-PCT-304-007	5/21/2012	1118	1		S1		
02-PCT-304-008	5/21/2012	1121	1		S1		
02-PCT-304-009	5/21/2012	1124	1		S1		
02-PCT-304-010	5/21/2012	1127	1		S1		

Relinquished by: (signature) [Signature]	Date 05/24/12	Received by: (signature) [Signature]	Company [Signature]
Company	Time 1:34	Received by: (signature)	Company
Relinquished by: (signature)	Date	Received by: (signature)	Company
Company	Time	Received by: (signature)	Company
Relinquished by: (signature)	Date	Received by: (signature)	Company
Company	Time	Received by: (signature)	Company

Project Name Parcel C Trench Survey		PO Number N/A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section	
Project Location HUNTERS POINT		Project Number 4044-0002		LABORATORY ADDRESS			
Sample Name For Roberson		Airfall Number N/A					
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592					
SAMPLE ID	DATE	TIME	Containers	LEVEL	TYPE	COMMENTS	LOCATION
02-PCT-304-011	5/31/2012	1240	1		S1		
02-PCT-304-012	5/31/2012	1245	1		S1		
02-PCT-304-013	5/31/2012	1250	1		S1		
02-PCT-304-014	5/31/2012	1255	1		S1		
02-PCT-304-015	5/31/2012	1300	1		S1		
02-PCT-304-016	5/31/2012	1305	1		S1		
02-PCT-304-017	5/31/2012	1310	1		S1		
02-PCT-304-018	5/31/2012	1315	1		S1		
02-PCT-304-019	5/31/2012	1320	1		S1		
02-PCT-304-020	5/31/2012	1325	1		S1	DUP	
02-PCT-304-021	5/31/2012	1330	1		S1		
02-PCT-304-022	5/31/2012	1335	1		S1		

Relinquished by (signature)		Date		Received by (signature)		Date	
[Signature]		5-31-12		[Signature]		5-31-12	
Company RSAS		Time 12:44		Company C&T		Time	
Relinquished by (signature)		Date		Received by (signature)		Date	
Company		Time		Company		Time	
Relinquished by (signature)		Date		Received by (signature)		Date	
Company		Time		Company		Time	

LABORATORY INSTRUCTIONS/COMMENTS		SAMPLING COMMENTS	
COMPOSITE DESCRIPTION		SAMPLING COMMENTS	
SAMPLING CONDITION (DO NOT REMOVE FROM LABORATORY)		SAMPLING COMMENTS	
TEMPERATURE - SAMPLING CONDITION - (GOODERISEAL)		SAMPLING COMMENTS	



TETRA TECH EC, INC.
1230 Columbia St, Suite 750
San Diego, CA 92101

Chain-of-Custody Record

TS 00386

Page 1 of 1

Project Name Parcel C Trench Survey		PO Number N/A		LABORATORY NAME ONSITE - Curtis & Tompkins, LTD.		Project Information Section			
Project Location HUNTERS POINT		Project Number 4044-0002		LABORATORY ID [REDACTED]					
Sample Name Ray Roberson		Aitchill Number N/A							
Project Chemist LISA BIENKOWSKI		Project Chemist Phone 949-756-7592							
SAMPLE ID	DATE	TIME	Containers	LEVEL	TYPE	T A P	COMMENTS	LOCATION	SAMPLE ID
02-PCT-304-023	5/31/2012	1340	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
02-PCT-304-024	5/31/2012	1345	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
02-PCT-304-025	5/31/2012	1350	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
02-PCT-304-026	5/31/2012	1355	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
02-PCT-304-027	5/31/2012	1400	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
02-PCT-304-028	5/31/2012	1405	1		S1	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

Relinquished by: (signature) [Signature]	Date 5-31-12	Received by: (signature) [Signature]	LABORATORY INSTRUCTIONS/COMMENTS	SAMPLE COMMENTS
Company RSPS	Time 10:44	Company CCT		
Relinquished by: (signature)	Date	Received by: (signature)	CONTAINER DESCRIPTION	
Company	Time	Company		
Relinquished by: (signature)	Date	Received by: (signature)	SAMPLE CONDITION/TEMPERATURE (FOR LABORATORY)	
Company	Time	Company	TEMPERATURE - SAMPLE CONDITION - COOLER SETPOINT	